

S  
004.6  
A3itm  
1998-99

# State of Montana

## 1998-99 Information Technology Plan

# MT<sup>21</sup>

Preparing Montana for the 21<sup>st</sup> Century

**Technology  
for a New  
Century**



MONTANA STATE LIBRARY

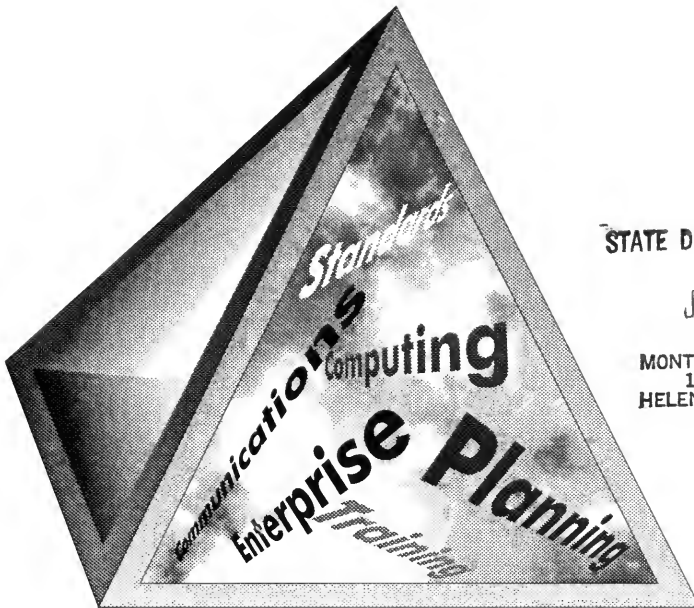


3 0864 0009 9692 9

# **STATE OF MONTANA**

## **1998-99 Information Technology Plan**

PLEASE RETURN



STATE DOCUMENTS COLLECTION

JUN 12 1997

MONTANA STATE LIBRARY  
1515 E. 6th AVE.  
HELENA, MONTANA 59620

**ISD**  
Information Services Division



Published biennially by the Information Services Division (ISD), the *Information Technology Plan* provides an overview of the state's information technology organization, environment, initiatives, and plans. Materials may be reproduced without permission. Alternative accessible formats of this document will be provided upon request.

**Should you have questions or comments regarding  
the 1998-99 Information Technology Plan,  
or desire additional copies, please contact:**

Wendy Wheeler  
ISD Customer Relations  
406/444-2856  
E-mail address: [wwheeler@mt.gov](mailto:wwheeler@mt.gov)  
Internet site: [www.mt.gov/isd](http://www.mt.gov/isd)

**Published by:**

Information Services Division  
Department of Administration  
State of Montana  
P.O. Box 200113  
Sam W. Mitchell Building, Room 229  
Helena, MT 59620-0113

Phone: 406/444-2700  
Fax: 406/444-2701

January 1, 1997





# TABLE OF CONTENTS

<b>Acknowledgments</b> .....	vii
<b>Executive Summary</b> .....	ix
<b>Section 1 – Enterprise Information Technology Architecture</b>	
<b>Introduction</b> .....	1
<b>Enterprise Organization</b> .....	1
ITAC, SEC, & ITMG .....	2
Information Services Division .....	3
Agency Information Technology Organizations .....	5
<b>State IT Expenditures</b> .....	6
IT Expenditure Categories .....	6
IT Expenditure Analysis .....	7
<b>Current Information Technology Architecture</b> .....	10
Computing Platforms .....	11
Enterprise Software Services .....	13
Telecommunications/Networking .....	17
<b>Section 2 – Enterprise Strategic Planning Initiatives</b>	
<b>Introduction</b> .....	29
<b>Legislative Initiatives</b> .....	29
Senate Joint Resolution No. 23 .....	29
Governor's Blue Ribbon Telecommunications Task Force .....	33
<b>Executive Initiatives</b> .....	33
1996 ITAC Strategic Planning .....	33
Coordination Task Force .....	35
Access and Privacy Task Force .....	39
GIS Task Force .....	42
Internet Policy and Services Advisory Task Force .....	43
SummitNet Executive Council .....	44
Year 2000 Compliance .....	45



<b>Management Initiatives</b> .....	45
Imaging Subcommittee .....	46
E-Mail Subcommittee .....	46

## **Section 3 – ISD, Agency, and University Information Technology Plans**

<b>Introduction</b> .....	49
<b>ISD Information Technology Plans</b> .....	50
Computing Operations Bureau .....	50
Policy, Development, & Customer Relations Bureau .....	53
Systems Support Bureau .....	60
Telecommunications Operations Bureau .....	64
<b>Agency Information Technology Plans</b> .....	67
Administration .....	67
Agriculture .....	71
State Auditor .....	73
Commerce .....	74
Montana Consumer Counsel .....	75
Corrections .....	76
Environmental Quality .....	79
Fish, Wildlife and Parks .....	83
Governor's Office .....	85
Montana Historical Society .....	88
Judicial Branch .....	91
Justice .....	94
Labor and Industry .....	98
Legislative Branch .....	101
Livestock .....	104
Military Affairs .....	107
Natural Resources and Conservation .....	108
Office of Public Instruction .....	110
Public Health and Human Services .....	112
Public Service Regulation .....	116
Revenue .....	117
Secretary of State .....	119
State Compensation Insurance Fund .....	122
Montana State Library .....	124
Transportation .....	127

<b>University Information Technology Plans</b> .....	129
Montana State University .....	129
The University of Montana .....	131
<b>FY98-99 IT Project Profiles</b> .....	137

## Appendices

A. Advisory Groups .....	191
B. Task Force Recommendations .....	197
C. Statutes .....	203
D. Enterprise Standards and Policies .....	219
E. Supported Software .....	233
F. Acronyms .....	241

## Figures

Figure 1: State of Montana Information Technology Enterprise .....	2
Figure 2: Information Services Division Organization Chart .....	3
Figure 3: Estimated FY96 Information Technology Expenditures .....	7
Figure 4: Estimated FY96 Information Technology Expenditures by Percentage .....	8
Figure 5: IT Expenditures as a Percentage of Total State Budget .....	9
Figure 6: State of Montana Information Technology Architecture .....	10
Figure 7: Mainframe Usage .....	12
Figure 8: Mainframe Rates .....	12
Figure 9: Visits to Montana Online .....	17
Figure 10: State of Montana Telecommunications Network .....	18
Figure 11: State of Montana SNA Data Network .....	19
Figure 12: SummitNet — State and Universities of Montana Multi-Protocol Network ...	20
Figure 13: State of Montana Network Growth — Number of Terminals .....	21
Figure 14: Long-Distance Usage .....	22
Figure 15: Long-Distance Rates .....	23
Figure 16: METNET Two-Way Interactive Video Site Locations .....	24
Figure 17: Video Network Usage .....	25
Figure 18: Montana Counties/Areas with 9-1-1 Service .....	27



*Preparing Montana for the 21<sup>st</sup> Century*



## ***ACKNOWLEDGMENTS***

**The *1998-99 Information Technology Plan* could not have been compiled without the help of the following individuals. ISD thanks them for their cooperation and participation.**

Information Services Division .....	Tony Herbert
Policy, Development, & Customer Relations Bureau .....	Jeff Brandt
Systems Support Bureau .....	Sharon Gorie
Telecommunications Operations Bureau .....	Carl Hotvedt
Computing Operations Bureau .....	Paul Rylander
Department of Administration .....	Lois Menzies
.....	Dave Beaudin
Department of Agriculture .....	Bob LaRue
Office of the State Auditor .....	Clay Andrews
Department of Commerce .....	Gary Wulf
Montana Consumer Counsel .....	Celia Farlan
Department of Corrections .....	Larry DeFrance
Department of Environmental Quality .....	Tripp Hammer
Department of Fish, Wildlife and Parks .....	Barney Benkelman
Office of the Governor .....	Judy Browning
Office of Budget and Program Planning .....	Steve Colberg
Montana Historical Society .....	Sharon McCabe
Judicial Branch .....	Pat Chenovick
.....	Dana Corson
Department of Justice .....	Jim Oppedahl
Department of Labor and Industry .....	Wayne Schaff
.....	Ken Olson
Legislative Branch (excluding the Montana Consumer Council) .....	Hank Trenk
Department of Livestock .....	Carol Robocker-Andersen
Department of Military Affairs .....	Doug Booker
Department of Natural Resources and Conservation .....	Bob Auer
Office of Public Instruction .....	Doug Kosty
Department of Public Health and Human Services .....	Mike Billings
Department of Public Service Regulation .....	Wayne Budt



Department of Revenue .....	Judy Jones
Secretary of State .....	Gregg Wheeler
State Compensation Insurance Fund .....	Eivind Nilsen
Montana State Library .....	Jim Senkler
Department of Transportation .....	Mike Randall
.....	Denis Burke
University System .....	Dr. Richard Crofts
Montana State University .....	David Todd
The University of Montana .....	Dr. John Cleaveland

**A special thanks to the following ISD staff whose efforts were invaluable to the Information Technology Plan:**

Project Manager .....	Dan Mossman
Project Coordinator .....	Kerry Spickelmier
Project Team .....	Linda Belflower
.....	Brett Boutin
.....	Dan Sidor
.....	Wendy Wheeler
.....	Irv Vavruska
Cover Designer .....	Trapper Badovinac

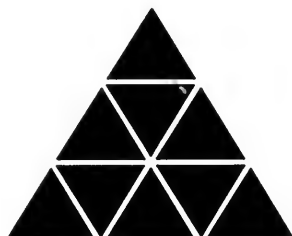


## ***EXECUTIVE SUMMARY***

---

### **INTRODUCTION**

The theme of the *1998-99 Information Technology Plan* is "**Preparing Montana for the 21<sup>st</sup> Century — MT<sup>21</sup>**." This theme builds on the concept stressed in the *1996-97 Information Technology Plan*, namely, the importance of establishing a strong, cohesive Information Technology (IT) enterprise. A strong IT enterprise provides the appropriate organization and tools to enable state agencies to focus on core business competencies and to efficiently deliver information and services to Montana's citizens. The last biennial plan used the segmented triangle shown below to depict the IT enterprise.



State agencies continue to take bold steps in using IT to meet business needs and prepare Montana for the 21<sup>st</sup> century. In response to this progress, this year's biennial plan presents the enterprise as a three-dimensional triangle — an enterprise that will meet the MT<sup>21</sup> challenge through: sponsorship, vision, and planning



IT sponsorship comes from the citizens' representatives — the legislators. Montana's legislative



body supports the IT enterprise by: participating on IT committees; enacting IT statute; and appropriating funds for IT initiatives.

The vision for using IT to achieve efficient and effective government services comes from the legislature and top management in the executive, legislative, and judicial branches. This vision is vital to empowering Montana, because without vision and direction, the IT enterprise can struggle in a status quo, non-progressive, reactive mode with little return on technology investments.

Emphasized throughout this document is the planning dimension, which includes: describing the current IT environment (Section I); reporting on strategic planning initiatives and progress (Section II); and listing Information Services Division (ISD), agency, and university IT plans for 1998-99 (Section III).

---

## BIENNIAL PLAN SECTIONS

***Section 1 describes the current IT environment in terms of the enterprise organization, state IT expenditures, and the current information technology architecture.***

- ▲ The **enterprise organization** provides the foundation that supports state IT activity. This enterprise organization consists of several executive- and management-level entities. The primary of these are the: Information Technology Advisory Council (ITAC); SummitNet Executive Council (SEC); Information Technology Managers' Group (ITMG); ISD; and agency IT organizations.
- ▲ **State IT expenditures**, gathered from fiscal year 1996 disbursements, are depicted for seven IT-spending categories: Personnel, Training, Hardware, Software, Telecommunications, Maintenance, Contracted Services, and Miscellaneous/Other.
- ▲ The **current information technology architecture (ITA)** describes the IT components required to meet the state's business needs. Major components of the state's ITA are: Computing Platforms, Enterprise Software Systems, and Telecommunications Networking.

***Section 2 details the enterprise strategic planning efforts undertaken during the last biennium.*** Through the creation of legislative-, executive-, and management-level committees and task forces, many enterprise IT issues have been addressed.

- ▲ An interim **legislative-level** committee was created by Senate Joint Resolution No. 23 to explore options for the revision of laws governing state fiscal and personnel management, and to provide an estimated schedule for the transition to fully integrated asset-management systems. The Governor's Blue Ribbon Telecommunications Task Force was charged to examine the state's telecommunications infrastructure, and make recommendations to ensure the implementation of policies, practices, and statutes regarding access to advanced telecommunication services.
- ▲ Following the 1993 strategic planning effort, ITAC addressed **executive-level** IT issues through the creation of these task forces: Coordination Task Force; Access and Privacy Task Force; Geographic Information Systems (GIS) Task Force; and Internet Policy and Services Advisory Task Force. In addition, The SummitNet Executive Council was formed in July 1995, by Executive Order of the Governor, to provide policy-level direction for matters relating to SummitNet.
- ▲ Two ITMG **management-level** subcommittees, created in the past biennium, have supported strategic initiatives: 1) the Imaging Subcommittee's mission was to establish imaging and document management policies and standards, and 2) the E-mail Subcommittee's purpose was to establish a state e-mail strategy.

***Section 3 provides ISD, Agency, and University IT Plans.***

- ▲ These **IT plans** detail each organization's mission, major projects for the upcoming biennium, the business goals these projects support, and accomplishments from the previous biennium.
- ▲ A **project profile table** provides details, when available, for agencies' FY98-99 IT projects. Included is information relating to platform type, implementation schedules, emerging technologies used, new project resources and associated costs, statutory changes, and public access.

---

## PREPARING FOR THE 21<sup>ST</sup> CENTURY

Preparing Montana for the 21<sup>st</sup> century will not be an easy task — it will require:

- ▲ commitment and financial support from the legislature and top management;
- ▲ dedication and hard work from all employees;



- ▲ the IT enterprise to partner with the business and non-profit community;
- ▲ the IT enterprise to understand the business needs of the State of Montana, as well as the needs and expectations of the citizens it serves; and
- ▲ comprehensive, progressive, and continuous IT strategic planning that forces the planners and participants to ask: "Where are we now?"; "What issues or problems need to be resolved?"; "Where do we need to be, and what do we need to look like to meet the business needs of the future?"; "What strategies need to be developed for us to reach this future vision?"; and "What action needs to occur to implement these strategies?"

Preparing Montana for the 21<sup>st</sup> century will not be easy; however, it is vital. The state's IT enterprise presents this biennial plan as one step in meeting this challenge.

# **Section 1**

## ***Enterprise Information Technology Architecture***







# ***ENTERPRISE INFORMATION TECHNOLOGY ARCHITECTURE***

---

## **INTRODUCTION**

The Information Technology Architecture (ITA) is a framework for linking the physical components of IT (computer hardware, software, and telecommunications) to the business objectives defined by the organization. The State of Montana's ITA is administered through the enterprise organization composed of the Information Technology Advisory Council (ITAC); the SummitNet Executive Council (SEC); the Information Technology Managers' Group (ITMG); the Department of Administration — Information Services Division (ISD); and Agency Information Technology Organizations.

These state IT advisory groups, ISD, and the agencies work as a team to set standards for enterprise computing hardware, software, and telecommunications. Using the enterprise organization to manage the ITA encourages: hardware platform connectivity; application and database sharing; the development of high-speed transmission mediums for voice, data, video, and imaging; the establishment of worker competency levels and training support; and software acquisitions that are compliant with established hardware and network standards. The ITA also supports important business goals such as providing faster, convenient, and more accurate services to Montana's citizens; promoting cost-effective IT use; and increasing worker productivity.

An understanding of the current ITA is essential for strategic planning and setting future IT direction. The *1996-97 Information Technology Plan* established a foundation for enterprise IT strategic planning. The *1998-99 Information Technology Plan* expands on this foundation to prepare Montana for the 21<sup>st</sup> Century — MT<sup>21</sup>.

---

## **ENTERPRISE ORGANIZATION**

As shown in *Figure 1* and discussed below, the State of Montana's enterprise IT organization consists of ITAC, SEC, ITMG, ISD, and Agency Information Technology Organizations.

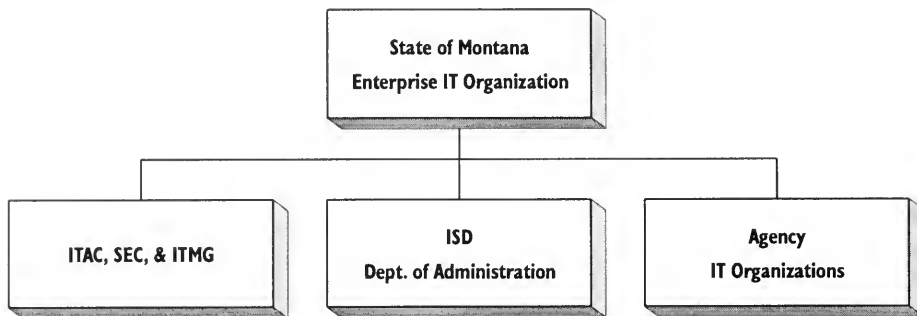


Figure 1: *State of Montana Information Technology Enterprise*

## ITAC, SEC, & ITMG

### ITAC

The Information Technology Advisory Council consists of agency directors; deputy directors; and representatives from city/county governments, the universities, and the executive, legislative, and judicial branches. ITAC serves in an advisory capacity for: reviewing statewide information and data processing policies; making recommendations regarding the application of new IT in state government; and advising the Department of Administration concerning long-term strategic planning for IT in state government. The current ITAC membership is listed in *Appendix A*.

### SEC

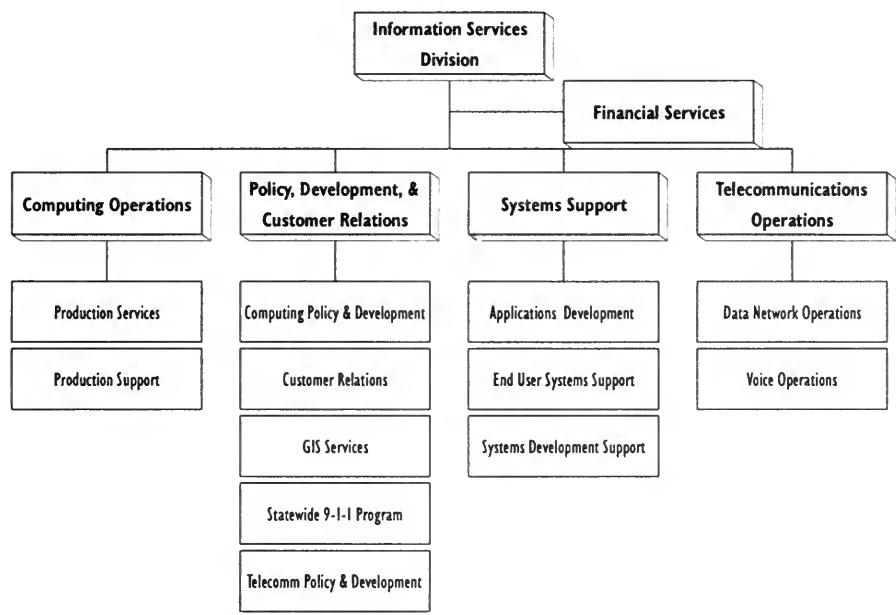
The SummitNet Executive Council was created in July 1995, by Executive Order of the Governor, to provide policy-level direction for matters relating to SummitNet. SEC consists of representatives from the executive and legislative branches; higher education; and local government. The current SEC membership is listed in *Appendix A*.

### ITMG

The Information Technology Managers' Group consists of agency IT managers or system coordinators plus representatives from city/county governments, the universities, and the executive, legislative, and judicial branches. ITMG reviews and makes recommendations on enterprise IT issues; reviews and provides feedback regarding information management policies established by ISD; and participates in statewide IT planning efforts. The current ITMG membership is listed in *Appendix A*.

# Information Services Division

As a division of the Department of Administration, ISD has a two-fold mission: 1) to provide services and assistance to state agencies in accomplishing their functions through the cost-effective use of IT, including data processing, telecommunications, office automation, and application systems design and development; and 2) to establish statewide IT policies and strategic direction to satisfy future demand for services. ISD's organizational structure is shown in *Figure 2*. Its authority and responsibilities are described in MCA (Montana Code Annotated) Sections 2-17-501-503, 2-17-301-302, 2-6-203-206, and 2-6-212. These Sections are provided in *Appendix C* of this document. Additional authority and responsibilities regarding 9-1-1 services are defined in Sections 10-4-101 through 10-4-303, which are not provided within *Appendix C*.



**Figure 2: Information Services Division Organization Chart**



## **Policy, Development, & Customer Relations Bureau**

The mission of the Policy, Development, & Customer Relations Bureau is to develop computing and telecommunications standards and policies; promote technology development; manage the statewide 9-1-1 program; coordinate IT training offerings; provide division-wide customer relations; and coordinate state geographic information system (GIS) activities, including a governance structure for addressing GIS policy issues. The GIS portion of this mission statement is fulfilled by the Bureau's GIS Services Section which was established during the first quarter of FY97.

## **Computing Operations Bureau**

The mission of the Computing Operations Bureau is to provide reliable, effective, and efficient centralized computing services to state agencies and other government units 24 hours per day, seven days a week. The Bureau consists of two sections: Production Services and Production Support. Production Services is responsible for the ongoing operation of mainframe and centralized mid-tier production computer configurations. This section is always focused on accommodating the growing automated workload demands of state agencies. Production Support is responsible for configurations; operating systems and maintenance; network interface support; methods/media management; and centralized security administration.

These sections provide professional computing operations support services; develop training curriculum; provide problem and change resolution in support of current software products; evaluate and install new software and hardware products; and determine the methods and use of software products by state employees. In addition, this Bureau is continually seeking innovative means to make the state's mainframe and shared mid-tier configurations more compatible and compliant with the growing IT processing needs of state agencies.

## **Systems Support Bureau**

The mission of the Systems Support Bureau is to support state agencies in their implementation and use of IT by providing: application system design, development, and support services; technical support services for software used by professional data-processing staffs; technical support services for software and access technologies employed by IT users; coordination and management of the selection of standard software applications; and emerging technology assessment and planning. This Bureau includes three sections: Applications Development; End User Systems Support; and Systems Development Support. The Bureau supports the mainframe legacy environment plus the client/server and personal computing environments.

## **Telecommunications Operations Bureau**

The mission of the Telecommunications Operations Bureau is to provide cost-effective, reliable voice, video, and data services for all state agencies, the University System, and other

government units. The Bureau is divided, by function, into two sections. The Data Network Operations Section supports the state's local- and wide-area-network infrastructure, including SummitNet, the state's frame-relay, multi-protocol, routed network; an SNA multi-drop network; a campus fiber-optic backbone; the Novell Network Operation System; and the Network Assistance Center. The Voice Operations Section oversees the operations of the state's telephone switches, voice mail, and integrated voice response systems; the video systems; and the statewide telecommunications backbone network. The Telecommunications Operations Bureau provides first-level support relating to voice and data network problems; coordinates network add, move, and change activity; oversees multiple vendor contracts supporting the statewide telecommunications infrastructure; and provides network design and consultation to all state agencies.

---

## Agency Information Technology Organizations

IT environments vary greatly among the agencies. The total number of agency FTEs in IT-classified positions exceeds 380 (Personal Services Survey, ITAC Coordination Task Force, November-December 1995). Of that total, 73% is contributed by seven agencies that each have 20 or more IT-classified FTEs. By contrast, the seven agencies with fewer than five IT-classified FTEs each, account for only 3% of the overall total. Systems analysis and programming activities account for approximately one-third of the total FTE time, and end-user support is the next largest support activity.

ISD centrally administers the only two mainframe computers in Montana state government and, since July 1997, offers processing on a mid-tier computing platform. Many agencies also maintain their own mid-tier and PC- or PC/LAN-based systems. For example, there are more than 55 mid-range computers deployed in the agencies. The state is actively converting enterprise LANs to the NetWare 4.1 release. In October 1996 there were approximately 70 LAN servers running 4.1, and that number was expected to increase to about 100 by the end of calendar year 1996.

Through connectivity to ISD's mainframe, all agencies have access to statewide application systems such as SBAS (Statewide Budget and Accounting System), and P/P/P (Payroll/Personnel/Position Control). In addition, the agencies run a wide variety of custom-written and commercial software across all platforms. As in other IT areas, the enterprise has established standards, with which the agencies comply, for desktop and LAN operating system software, as well as for desktop application software.



Despite the diversity of agency systems and environments, state government has an unlimited potential to share information and resources across all agency platforms. This is made possible by the collaborative efforts of the agencies (through ITAC, SEC, and ITMG) and ISD in adopting standards and strategic direction that establish the foundation on which the enterprise is built.

---

## STATE IT EXPENDITURES

The data shown in *Figures 3 - 5* detail expenditures from the executive, legislative, and judicial branches of state government; not included are the Board of Education, the Commissioner of Higher Education, the University System, or other educational entities. These expenditure data were obtained from fiscal year 1996 disbursements. Due to variations in the agencies' use of state object (cost) codes, the data provided in these three figures should be considered representative but not all inclusive.

---

### IT Expenditure Categories

In *Figures 3 and 4*, fiscal-year totals have been subdivided as follows: Personnel, Training, Hardware, Software, Telecommunications, Maintenance, Contracted Services, and Miscellaneous/Other. Each of these spending categories is described in more detail below.

#### Personnel

The Personnel bar represents the personnel services expenditure from the three branches of state government. It should be noted that this expenditure reflects *only* state employees *directly* involved in providing *IT* services. Although many other state employees who are *not* classified as IT personnel *indirectly* perform IT functions, they are not represented in *Figures 3 and 4*.

#### Training

The Training bar includes IT training and education expenditures.

#### Hardware, Software, Telecommunications, and Maintenance

These categories represent expenditures for IT assets, facilities, and support. This includes: mainframe, mid-tier, and PC hardware and software; local and wide-area hardware, software, and facilities; and local and long-distance voice circuits and maintenance contracts.

## Contracted Services

This category represents contracted IT consulting services, application system development, and programming services.

## Miscellaneous/Other

These expenditures consist of data processing supplies such as paper, printing, microfilm, subscriptions, recruiting, and rent.

# IT Expenditure Analysis

The total, statewide, IT expenditure for *Fiscal Year 1996* was approximately \$57.2 million (see *Figure 3*).

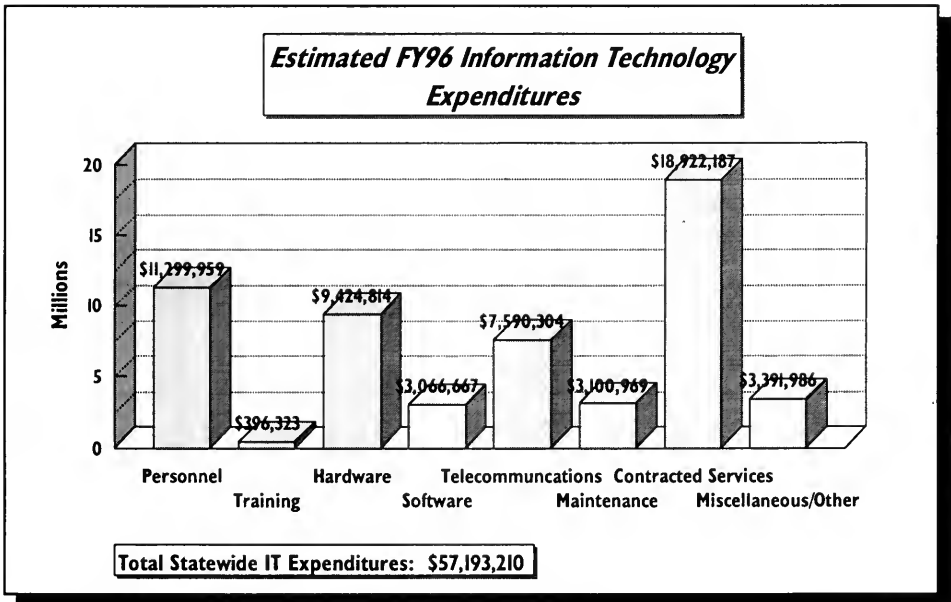


Figure 3: *Estimated FY96 Information Technology Expenditures*

Figure 4 represents statewide IT expenditures, with spending subcategories shown by percentage.

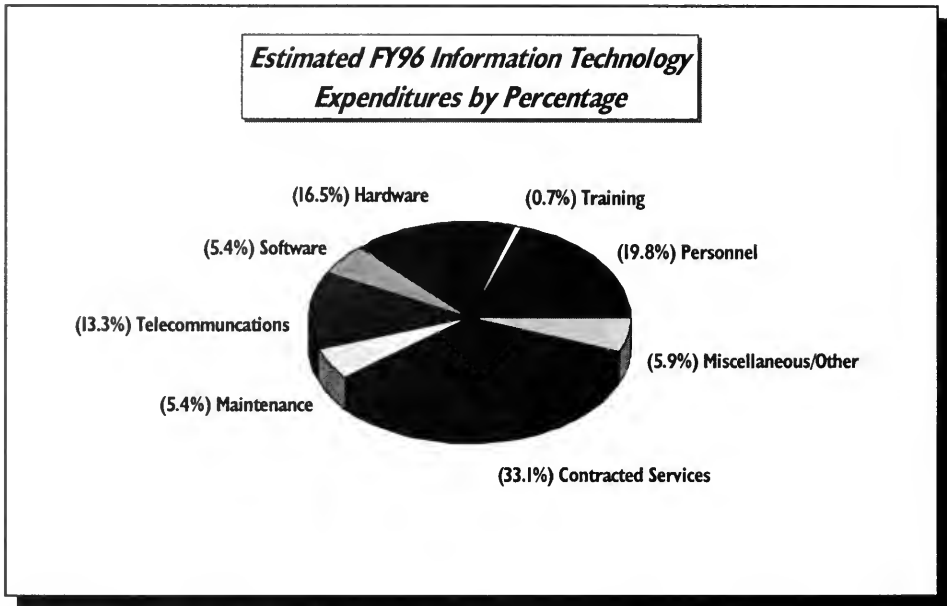
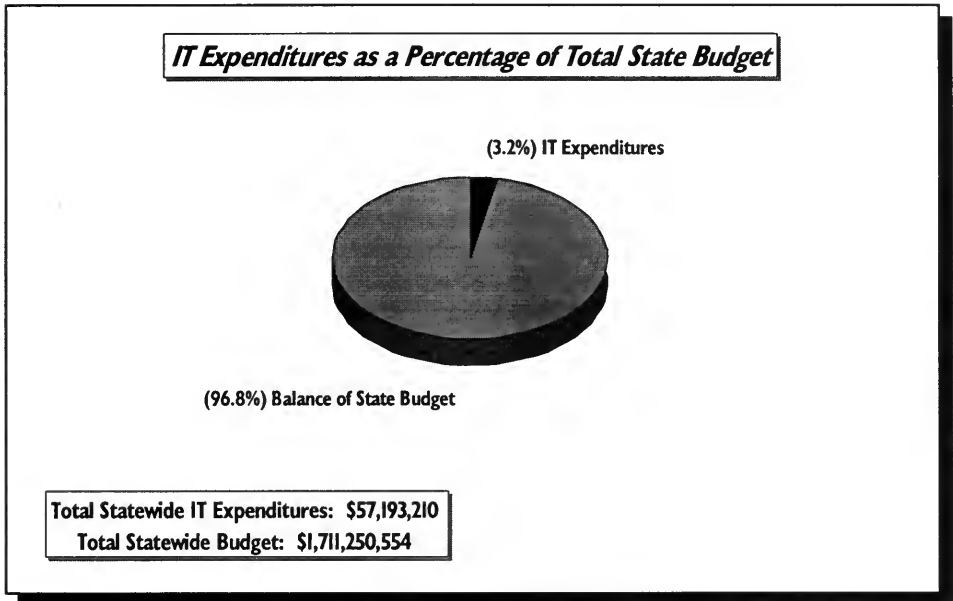


Figure 4: *Estimated FY96 Information Technology Expenditures by Percentage*

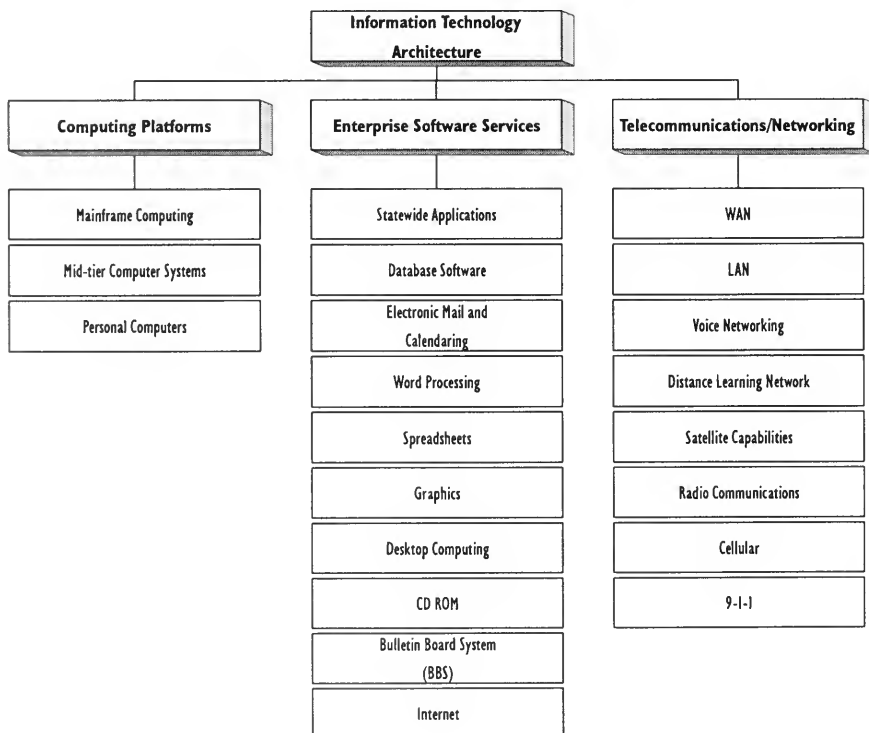
In *Figure 5*, statewide IT expenditures are represented as a percentage of budgeted funds for *Fiscal Year 1996* (as provided by the Office of the Legislative Fiscal Analyst in the 1997 biennium budget analysis). Note that IT expenditures account for only slightly more than 3% of the total budgeted funds.



**Figure 5: *IT Expenditures as a Percentage of Total State Budget***

## CURRENT INFORMATION TECHNOLOGY ARCHITECTURE

In general, ITA components can include hardware, software, telecommunications, and any other IT that will help an entity meet its business goals. As discussed above, the enterprise organization manages the state's ITA, thereby ensuring a powerful resource to support state business goals. As shown in *Figure 6* and discussed below, the state's current ITA includes computing platforms; enterprise software services; and telecommunications/networking, which encompasses statewide telecommunications and data networks.



**Figure 6: State of Montana Information Technology Architecture**

## Computing Platforms

The State of Montana develops and maintains applications on various computer platforms. Large, statewide applications, such as the Statewide Budget and Accounting System (SBAS) and Payroll/Personnel/Position Control (P/P/P), are run on ISD's IBM ES 9000-832 mainframe. The University System, the Departments of Transportation and Natural Resources, and other state agencies develop and maintain applications on Digital Equipment Corporation's (DEC) VAX platform. In addition, the Department of Justice operates the Criminal Justice Information Network (CJIN) system on ISD's IBM 4381 located in the National Guard Armory Building in Helena. Mid-tier computers provide an agency-level application and database development platform, and personal computers (PCs) are widely used for wordprocessing, spreadsheets, electronic mail, terminal emulation, and small data-management tasks.

### Mainframe Computing

Although growth in the use of alternative computing platforms (personal and mid-range computers) has been dramatic, mainframe computing continues to grow significantly every year. ISD mainframe use in FY96 increased 83% from FY94, and represented a four-fold increase over FY92. This growth in mainframe use has allowed reduced computer processing rates, while improving performance and expanding services.

During the next five years, agencies will continue to use the ISD mainframe to accommodate many automation needs. Improved price and performance of the Data Center (reflected in consistent, annual rate reductions) will continue to keep this platform competitive with alternative platforms. In addition, mainframe technology is yet unmatched in its ability to provide high performance computing and economical storage of vast amounts of information. Recent hardware and software enhancements made to the mainframe infrastructure have improved service and provided a more effective computing environment. Hardware enhancements include faster computer processors; more efficient storage access; and improved computer output options. Software enhancements include automated report distribution with online report viewing; automated computer job scheduling; and automated processing facilities.

*Figure 7* shows ISD mainframe usage in terms of online transaction-processing services (such as Batch, CICS, TSO, and IDMS). The decline in rates for these mainframe services is depicted in *Figure 8*. Both figures show actual usage and rate information for fiscal years 1989-96, and projected usage and rate information for fiscal years 1997-99.

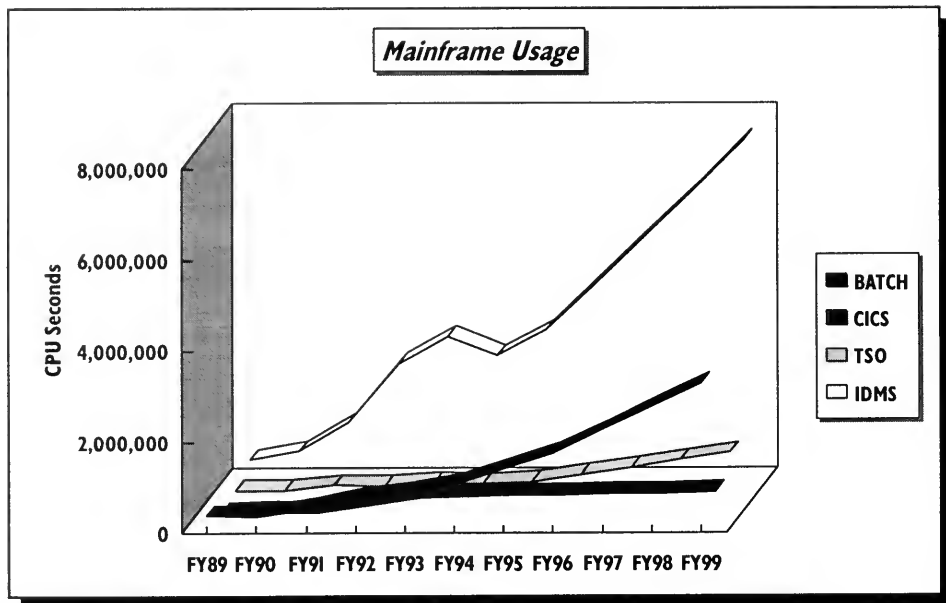


Figure 7: Mainframe Usage

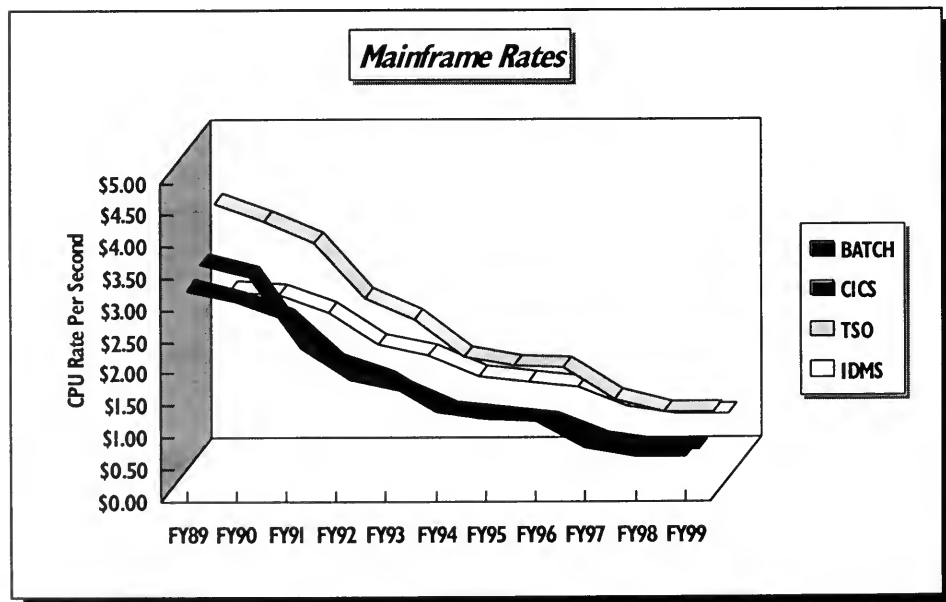


Figure 8: Mainframe Rates

## **Mid-Tier Computing Systems and Standards**

The state formally established mid-tier computing standards for the enterprise in July 1995 when ITAC adopted the recommendations proposed in the "Report of Mid-tier Computing Standards and Recommendations" document developed by ISD and ITMG.

In July 1996, ISD awarded a contract to Digital Equipment Corporation for a DEC Alpha 4100 computer and now provides enterprise mid-tier services for state agencies. The objectives of this offering are to supply effective mid-tier computing for state agencies that are interested in contracting for this service; provide a cost-effective computing facility and services by leveraging personnel, operational, hardware and software expenses over a broader range of users; and furnish an environment and facilities that support a production dependency.

Several agency systems already reside on mid-tier computing platforms. The Department of Public Health and Human Services' Medstat Reporting System and the State Fund's Benefits Information System (BIS) reside on the IBM RS6000 platform. Other mid-tier computing platforms currently in use include: the DEC Alpha platform used by the Departments of Commerce, Transportation, and Labor and Industry; and the Sun Microsystems' SPARC platform used by the State Library (NRIS, the Natural Resources Information System) and the Department of Natural Resources. The use of mid-tier computing platforms is expected to increase in the next five years as agencies develop new applications and convert legacy systems.

## **Personal Computers**

Currently there is an installed base of more than 7000 network-attached PCs statewide. The state has established the IBM-compatible as the standard for PCs. Term contracts are in place with Dell, Digital, and IBM for the purchase of PCs and peripherals. By limiting the number of contracted vendors, the state has been able to standardize on key system components while continuing to develop and maintain a well-supported, reliable enterprise network. The term contracts are managed by ISD, who reviews and approves these acquisitions. During the next five years, the state anticipates adding or replacing 1500 to 2000 PCs annually.

---

## **Enterprise Software Services**

During the past biennium, the commitment to enterprise software solutions continues to be demonstrated through ITAC, SEC, ITMG, and ISD cooperative efforts, which have defined electronic mail directions; selected a desktop database standard; and provided overall tactical and strategic planning.



## **Statewide Applications**

Several large, statewide applications exist to support agency administrative activities. These systems provide centralized functions, primarily on the mainframe platform, and include the Statewide Budgeting and Accounting System (SBAS); Payroll, Personnel, and Position Control (P/P/P); and the Warrant Writing System. All state agencies use these systems to accomplish common administrative processes through a single, consistent means. In existence for over a decade, these systems have evolved as IT has advanced. SJR 23 recommendations (see Section 2 — Enterprise Strategic Planning Initiatives) include tactical and strategic plans to improve these systems by making them easier to use, allowing management increased access to information, and better integrating financial processes.

## **Database Software**

By 1977, implementing large and complex application systems with existing software had become increasingly difficult. As a result, mainframe database management systems (DBMS) were evaluated, and the Integrated Database Management System (IDMS) was selected as the mainframe database product. The state has a significant investment in IDMS, and ISD will support this architecture as agencies continue to develop mainframe database systems.

From IDMS's initial use until the early 1990s, there was little interest in data sharing, especially across agency lines. However, as more agency programs were automated, duplicate efforts, and the potential benefits of sharing resources, became apparent. In addition, major IT developments allowed for more computing power at the desktop. In 1992, ITAC and ITMG responded to these factors by adopting the Data Sharing Resolution (see *Appendix D*).

In 1993, an ITMG subcommittee was formed to define the state's database direction and promote agency data sharing. The subcommittee studied and evaluated the technology available and addressed the need to share data across all platforms and between agency databases. In the spring of 1994, ITAC adopted Oracle Corporation's software as the relational database standard for the state, which culminated in a contract for statewide enterprise database software. Agencies can now develop applications on several platforms and have the capability to share information across agency lines.

## **Electronic Mail and Calendaring**

Electronic mail (e-mail) is extensively used in state government for exchanging messages, documents, and files. Its benefits include worker productivity gains; cost savings; and faster, more efficient, service delivery. The state's enterprise e-mail system consists of several PC, mid-tier, and mainframe products that allow information exchange among state agencies and university units. There are approximately 6900 e-mail users connected to the enterprise e-mail system, and many of these users exchange messages and documents with Internet users

throughout the country and the world. In addition to e-mail, many state workers use electronic calendaring to manage their calendars and to schedule meetings with others.

The current electronic mail and calendaring technology was selected in 1992 based upon the telecommunications capabilities at that time. With implementation of SummitNet, other capabilities are now possible. In addition, the current primary product, ZIP!Office from Attachmate, is no longer being enhanced and soon won't be supported, so a new selection will be necessary. Today's products, in addition to electronic mail and calendaring, provide a variety of worker productivity tools including: group conferencing and discussion; personal information managers (PIM); document management; and workflow and process management. The enterprise electronic mail strategy for the next five years includes the replacement of the existing electronic mail system and the expansion of capabilities for agencies to implement additional groupware features.

## **Word Processing**

WordPerfect has been the state word-processing software standard since 1984. Used on the majority of PCs in state government, it is currently the most widely used state application. WordPerfect runs on both DOS and Windows PCs, as well as on some of the DEC VAX systems. As users convert to the Windows version, they will use more of its desktop-publishing capabilities.

## **Spreadsheets**

Lotus 1-2-3 has been the state spreadsheet software standard since 1984. It runs on both DOS and Windows PCs and is extensively used in all agency and department applications.

## **Graphics**

Lotus Freelance and CorelDraw are the state graphics software standards. Lotus Freelance is used for creating business charts, graphs, and slide shows. CorelDraw is a high-end drawing package used for more technical or complex drawings.

## **Desktop Database Standard**

In addition to the Oracle enterprise database software standard, Lotus Approach has been selected as the state desktop database software standard. Lotus Approach provides desktop database capabilities for non-mission-critical agency applications.

## **Windows**

Windows has been established as the state, standard, graphical user interface (GUI) product. Most agencies have made the transition to the Windows environment, and the ITAC minimum technology initiative will encourage further migration to this technology. State agencies began



migrating to the Windows 95 version during FY97. Subsequent to this migration, Windows 95 releases of standard desktop software products will be available, and agencies will be migrating to new versions of other applications, such as WordPerfect and Lotus.

### **Bulletin Board System (BBS)**

ISD offers a central BBS, operated by the Office of Public Instruction, that provides pertinent agency information to the public. Multi-user access is obtained through in-state 800 and local Helena telephone numbers, and through the state's capitol-complex backbone. A wide variety of state agency information is available, including road and weather reports, legislative news, agricultural information, Supreme Court decisions, public meeting notices, and board vacancy postings. BBS use has grown steadily, with more than 50,000 calls placed in FY95. Continued BBS growth is expected, and planned improvements include an easier interface for Windows users and formats that allow for greater universal public access, including from the Internet. Eventually, the goal is to have one access system that disseminates state information to the public, thereby avoiding redundant posting efforts by the agencies.

### **Internet**

As shown in *Figure 9, Montana Online*, the State of Montana's Internet home page, received more than one million "hits" from October 1995 through May 1996. Of that total, almost 42,000 represented unique, individual visits. Currently, the home page is receiving about 9000 hits daily. Although most of the sessions during this eight-month period were initiated from within the United States, many others originated from foreign countries, including Australia, Austria, Canada, Denmark, Finland, France, Germany, Hong Kong, Hungary, Iceland, Italy, Japan, Mexico, Morocco, Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom.

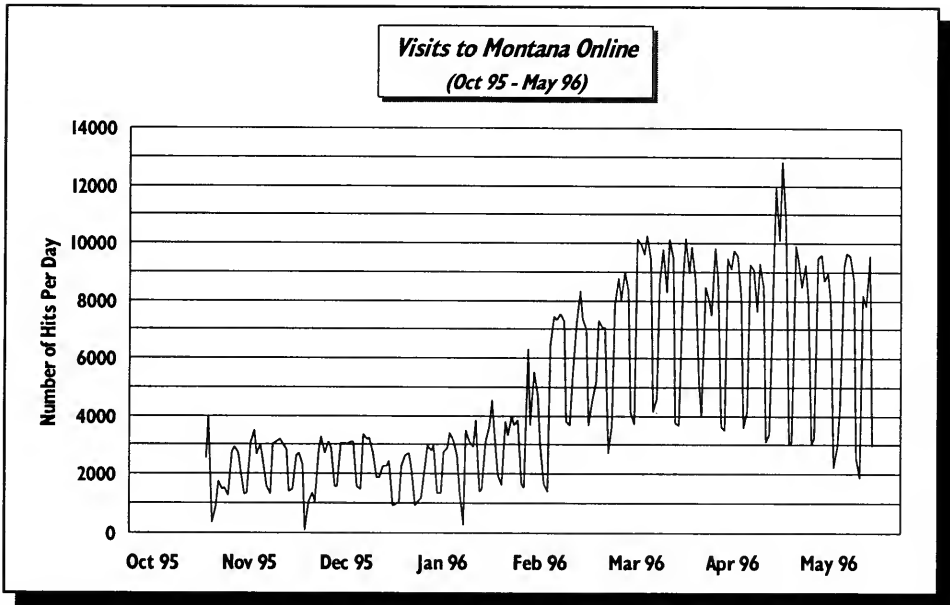
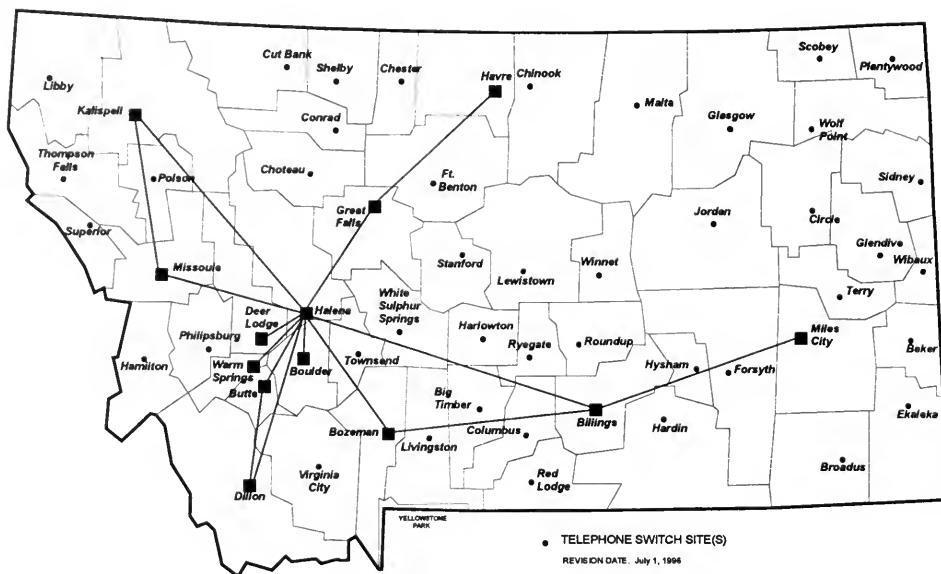


Figure 9: *Visits to Montana Online*

## Telecommunications/Networking

Figure 10 shows the State Telecommunications Network (STN) which provides data, voice, and video communications to state and local government, law enforcement agencies, and educational institutions throughout Montana. The STN is built on facilities leased from telecommunications companies (one route, Bozeman to Helena, consists of a jointly owned/leased facility). The STN supports telephone and data communications for all state agencies. In addition, it manages two-way, interactive, video communications between 13 cities, with connections to other intra- and interstate video providers, and supports two-way radio communications and FM radio broadcasts (KUFM).



**Figure 10: State of Montana Telecommunications Network**

This enterprise network is one of Montana's greatest IT strengths since substantial savings are realized through the economies of scale of managing one state network. Expansion of the network during the next five years will improve capabilities for voice and data traffic, video, two-way radio and wireless transmissions, and broadcast radio and public TV signals.

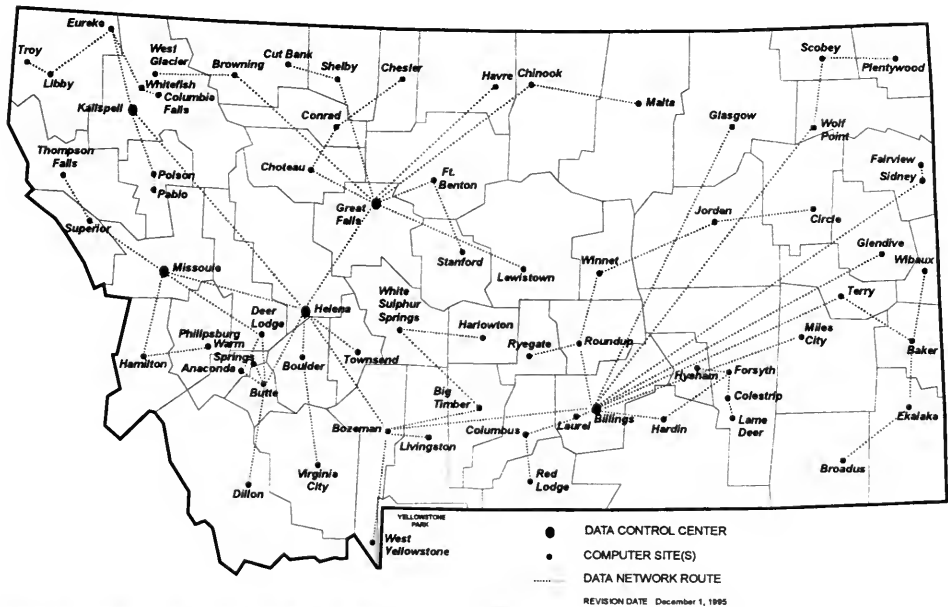
Data networking is probably the most complex element of the state's enterprise networking environment since it involves interfacing diverse applications and data located on different computing platforms. As agencies look at data sharing, downsizing, and the reengineering of applications and processes, the enterprise must be proactive in procuring a solution for interfacing heterogeneous databases.

## Wide-Area Data Networks

Two wide-area networks (WANs), managed by ISD, operate over the STN: the SNA data network (IBM's System Network Architecture) and SummitNet (State and Universities of Montana Multi-Protocol Network). Although the state currently uses both of these networks, the SNA network will eventually be collapsed into SummitNet once it is fully deployed.

**SNA Network.** As shown in *Figure 11*, state agencies use the SNA to connect to the state's IBM mainframe, which is located in Helena. The SNA links 4300 devices, at 450 sites, to that

mainframe. During the 19 years this network has been in place, it has provided reliable, manageable, efficient, and cost-effective networking services.



**Figure II: State of Montana SNA Data Network**

**SummitNet.** This network provides the agencies and universities multiple computing platform interconnectivity. In existence since 1992, SummitNet handles different types of network traffic and offers more functionality, than the SNA network, by supporting multiple protocols over a frame relay, routed, network infrastructure. As shown in *Figure 12*, the state has an aggressive implementation plan and expects to have SummitNet fully deployed during 1998. The state expects that growth in the number of applications residing on this network will generate more network users and increase the demand for services. Eventually, SummitNet will provide network connections for state offices and other political subdivisions in all of Montana's 56 counties.

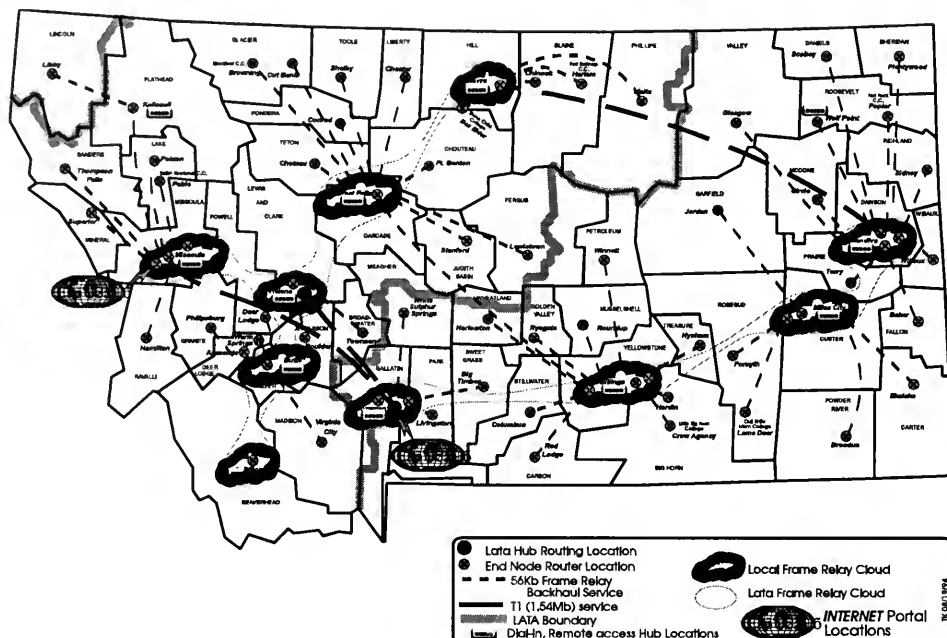


Figure 12: *SummitNet — State and Universities of Montana Multi-Protocol Network*

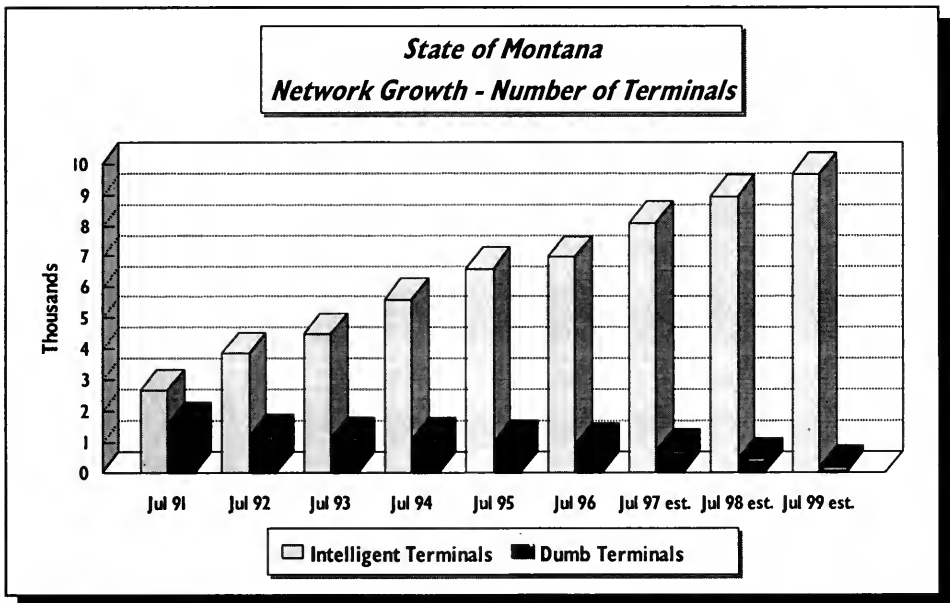
## Local-Area Data Networks

Computers within an office or a building, or within a local campus area, are connected by networks called local-area networks (LANs). LANs first appeared in the state around 1987 and have expanded so rapidly that today virtually all of the state's computers are attached to a LAN. They are primarily used to share computer disk storage, computer software, printers, and other resources among many PC users.

ISD manages LANs in counties throughout Montana, and these LANs provide communication facilities for all of the state agencies to share. Typically, LANs are connected through the state's existing wide-area data network or the capitol-complex fiber-optic backbone.

ISD has extended the capitol-complex fiber-optic backbone to serve 14 buildings. This backbone handles LAN traffic and will eventually serve voice and video needs. It is anticipated that the fiber-optic backbone will provide agencies with a single high-speed LAN capable of meeting LAN connectivity needs for at least 10 years. During the next five years, LAN traffic will continue to increase as agencies connect approximately 500 to 1000 microcomputers per year to the existing installed base. *Figure 13* illustrates the historical and projected increases in the

numbers of intelligent and "dumb" (mainframe) terminals for fiscal years 1991-99. These statistics indicate a continuing decline in the use of dumb terminals and a steady increase in the use of intelligent terminals. This confirms that state agencies have become reliant on LANs to accomplish their IT responsibilities.



**Figure I3: State of Montana Network Growth — Number of Terminals**

## Voice Communications

ISD provides telephone service to all agency sites throughout Montana. In cooperation with the University System and state agencies, ISD manages Private Branch Exchanges (PBXs) at 23 sites (including six in Helena and eight at the university units) and smaller key telephone systems at more than 200 locations statewide. These 23 PBXs are connected through the STN facilities, thereby allowing the state to carry most of its internal traffic on the network without incurring incremental long-distance charges.

The STN provides local and long-distance calling capabilities for agencies throughout the state. ISD maintains contracts with AT&T, Sprint, and US West for intrastate, interstate, and international calling. This provides the state with substantial long-distance savings on calls made from state facilities or with a state credit card. During the next five years, the state will continue to contract for local and long-distance circuits to meet the increased demand for voice, data, and video communications.

The state began the active management of telephone systems in 1982 when it acquired its first PBX. Since that time, 23 additional PBXs, which manage more than 17,000 telephones, have been purchased. These PBXs provide on-campus and local calling services, and give access to the STN for long-distance calling. Additionally, these systems provide 800/900 services, fax communications, dial-in data calling, voice mail features, access for telecommunications devices for the deaf, and operator services. The state's PBXs provide management for: telephone, limited WAN, SNA, SummitNet data-circuit, and METNET video-image services. During the next five years, the state will continue to upgrade PBXs to improve service capabilities and achieve telecommunication cost savings. *Figures 14 and 15*, respectively, show actual long-distance usage and rate history for fiscal years 1991-96, and projected usage and rate history for fiscal years 1997-99.

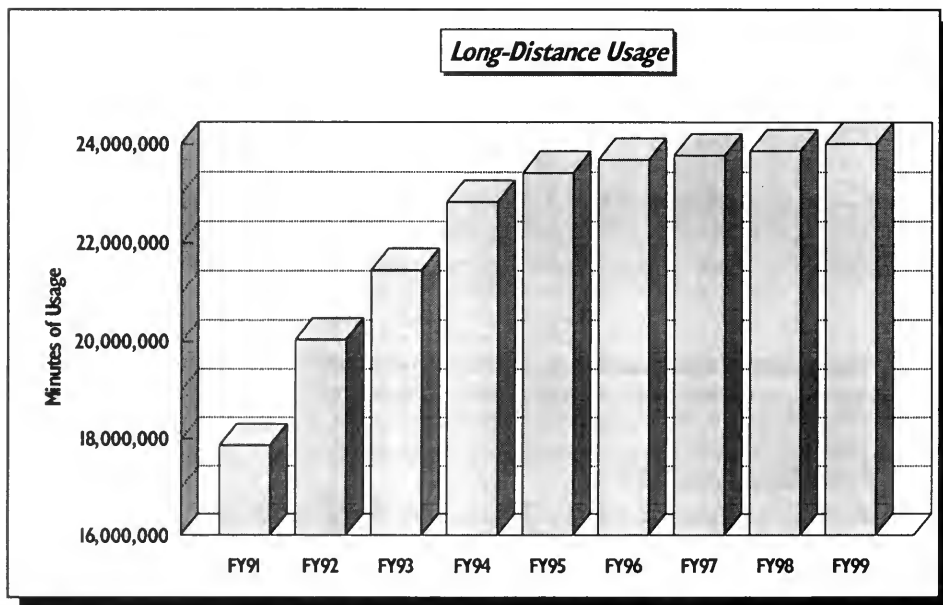


Figure 14: *Long-Distance Usage*

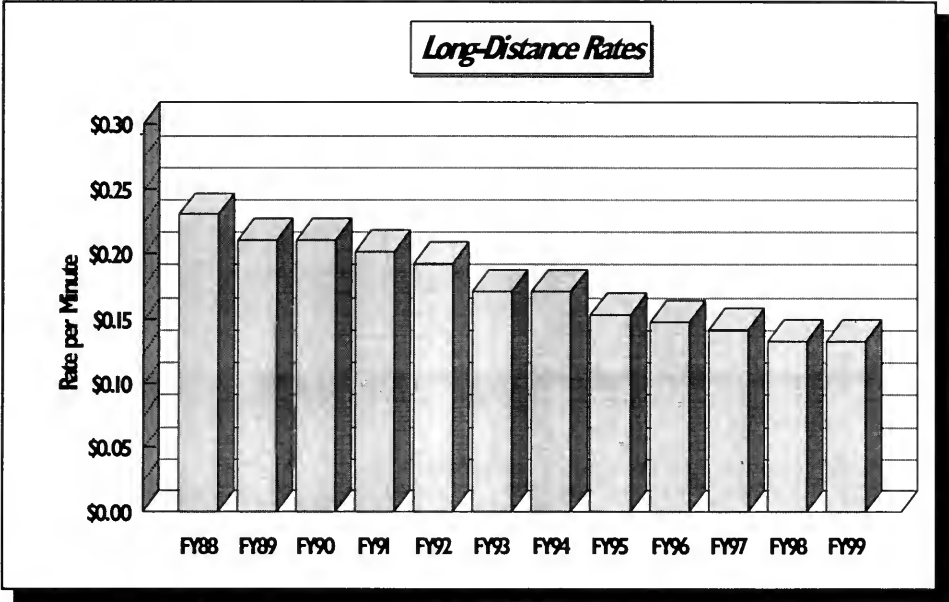
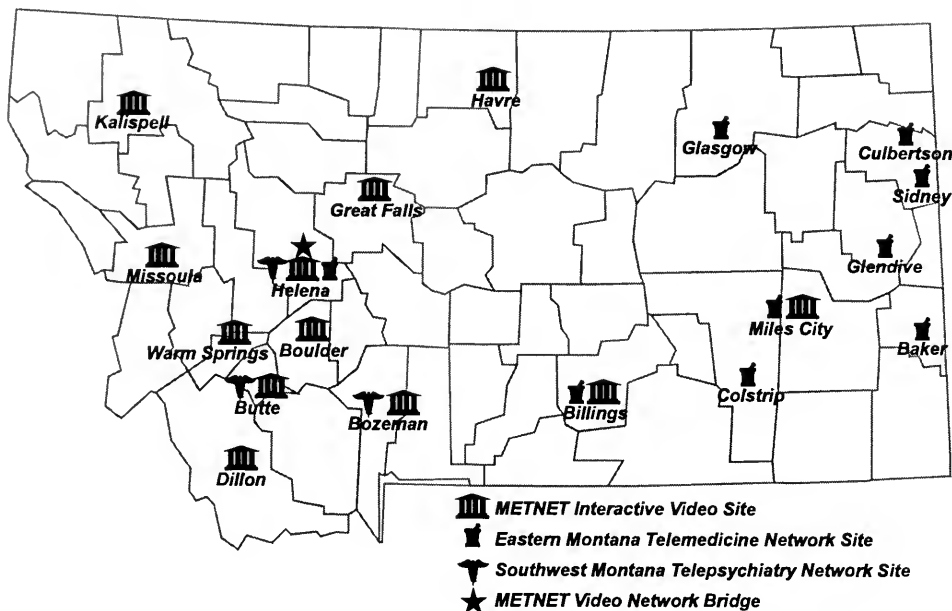


Figure 15: *Long-Distance Rates*

### Video Communications

The Montana Educational Telecommunications Network (METNET: Two-way Interactive Video Network), managed through the University System and the Office of Public Instruction, provides distance learning opportunities for the State of Montana. The system is used primarily for the delivery of classroom instruction, in-service training for teachers, and interactive video conferences. Through METNET, Montanans are able to teach, learn, and share educational resources and opportunities.



**Figure 16: METNET Two-Way Interactive Video Site Locations**

Virtually all types of telecommunication technologies and resources are used in METNET, including computers and data networks, satellite, interactive video, public telephone networks, and fiber optics. METNET video technology is based on two-way interactive video systems located in various cities throughout Montana (*Figure 16*). In 1992, systems were installed at Helena, Bozeman, Missoula, and Billings. Then during 1993-94, systems were added in Miles City, Kalispell, and Great Falls. During 1995-96, additional sites were added in Warm Springs, Boulder, and Helena to meet specific needs. Other sites added in 1996 were Dillon and Havre.

An agreement with a Montana Power Company subsidiary, Entech, provides a METNET site in Butte, and another agreement with the Deaconess Medical Center in Billings allows the interconnection with their video system. Testing is also underway to study the feasibility of interconnection with a video system operated by Mid-Rivers Telephone Cooperative in Eastern Montana. In addition, connections to the Eastern Montana Telemedicine network allow the state to reach into Eastern Montana.

Over the next five years, METNET will continue to deploy video network equipment at additional sites. METNET has been, and will continue to be, a highly visible and successful program for the State of Montana. *Figure 17* shows actual video network usage for fiscal years 1993-96, and projected usage for fiscal years 1997-99.

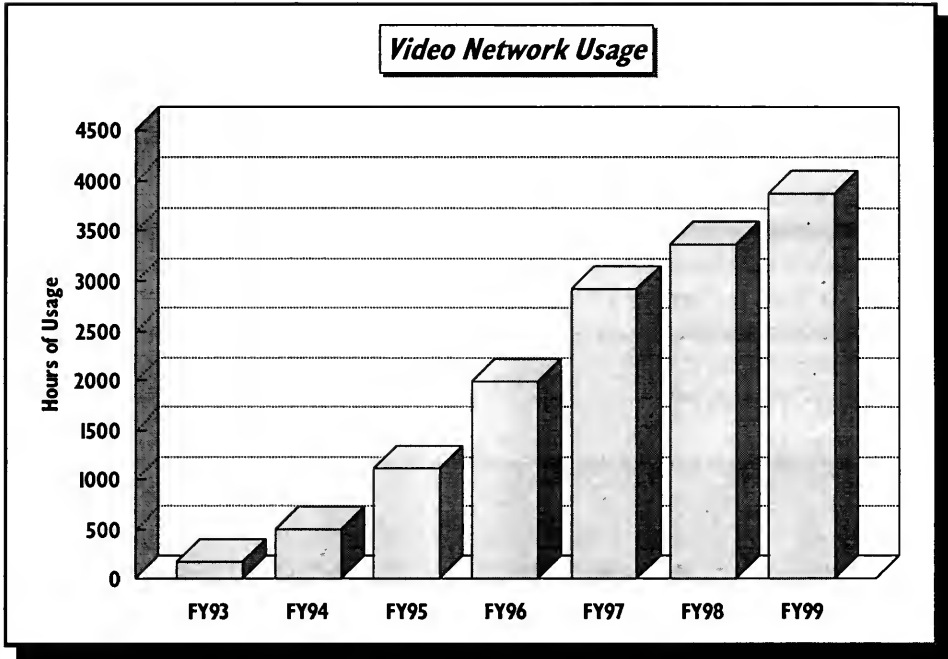


Figure 17: *Video Network Usage*

## Radio Communications

State radio planning and development activities have been concentrated in four areas: mutual aid communications; spectrum management; state and local system technical support; and future systems.

In anticipating long-term wireless communications needs, the state has focused on both conventional land-mobile systems, such as those used by public safety agencies for dispatching personnel, and advanced services such as cellular telephone and mobile data terminals. The distinctions between wired and wireless communications, and between closed private systems and open common-carrier services, are becoming less evident. The state's goal is to provide for current needs and to plan an efficient transition to future technology and the evolving needs of state and local communications systems users.

Mutual aid communications has proven to be the cornerstone of effective inter-agency cooperation during times of emergency. Plans, policies, and procedures have been developed that describe how shared radio frequencies licensed by the state can be put to use during incidents of any size. ISD has recently printed 3200 copies of the mutual aid communications



handbook and has distributed it widely. This publication is used by public safety planning staff (from the smallest fire department to the largest state agency) as well as by communications trainers statewide. This program has proven to be one of the most effective solutions to public safety interoperability in the nation.

As the Federal Communications Commission's (FCC) liaison for public safety frequency assignments in Montana, ISD is heavily involved in public safety coordination issues between state and local agencies. Planning is currently underway for Montana's next generation of public safety and general government radio systems. Pending FCC rules and regulations threaten to dramatically alter the radio landscape as we now know it. This action (commonly referred to as the FCC's "refarming" proposal) would require the replacement of equipment, over the next five to 15 years, with technology that is only currently beginning to emerge.

The existing rules and regulations were issued in their moderated form in 1995 and are currently under a moratorium pending input from a national advisory committee. This respite has allowed the Public Safety Communications Task Force (consisting of state and local public safety representatives) time to prepare for regulatory changes, technological advances, and an increase in user needs. This task force is guiding the development of next-generation radio systems for use among multiple agencies and various levels of local government. The state has established a contract with a radio network architecture consultant, with the purpose of investigating the operational needs and requirements of state agencies and local governments. This effort will provide an analysis of needs and identify changes occurring in the technical and regulatory environments. This information will be used to provide a framework from which the state can plan and implement future communications systems.

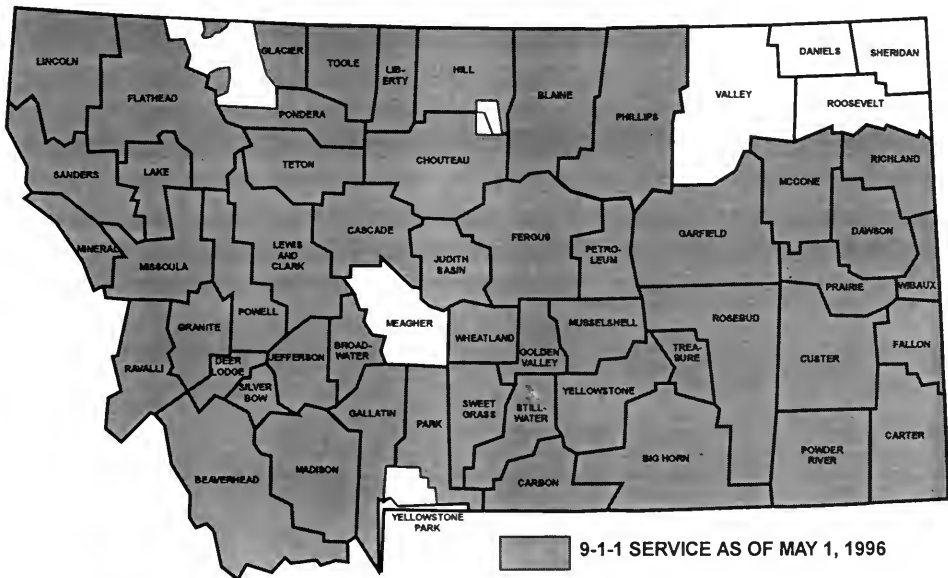
## **Cellular/Wireless Systems**

Planning for advanced wireless communications services has paralleled that of traditional land-mobile radio. Cellular telephone use by state agencies is growing and has proven to be an effective communications tool for agency personnel. While growth is expected to stabilize over time, a 50% biennial growth rate in the number of state cellular subscribers is anticipated for the foreseeable future. Cellular service is being used to provide mission-critical communications for state agencies as well as local governments. Cellular service is particularly useful for workers who travel a great deal, and for those who are not supported by the state's existing radio systems. In the past year, the state has contracted with CommNet Cellular to offer services to state agencies desiring cellular service.

During the next five years, cellular service will continue to expand into Montana communities, while subscriber costs will decline. This combination of trends will make cellular telephone service attractive and viable for state agencies.

## 9-1-1 Service

The statewide 9-1-1 Emergency Telephone System Program has been in place since 1987. *Figure 18* shows the areas in Montana with 9-1-1 service. ISD is charged with administering the funds and assisting local communities in planning and implementing 9-1-1 emergency telephone systems. Funding for the implementation and operation is generated through a monthly 25-cent fee on each telephone subscriber's access line, with some exceptions for non-taxable entities. The funds collected are allocated to local governments on a per capita basis after program administration and equipment costs have been deducted.



**Figure 18: Montana Counties/Areas with 9-1-1 Service**

Most of the state's 9-1-1 systems provide minimum (basic) service, although a few have Automatic Number Identification (ANI) that displays the telephone number of the calling party. The greater Billings area now has Enhanced 9-1-1 (E9-1-1) that provides Automatic Location Identification (ALI) in addition to ANI. Across the state, local jurisdictions have expressed interest in upgrading their 9-1-1 systems to incorporate E9-1-1 features, but limited funding has made this conversion impossible for all but the most heavily populated areas.

At present, not all 9-1-1 emergency calls can be routed over dedicated trunks to the Public Safety Answering Points (PSAPs). Without dedicated trunks, ANI information can not be transmitted;



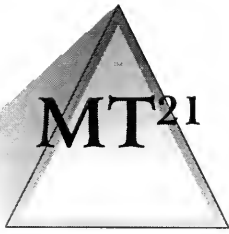
9-1-1 callers compete with other telephone users for time on the public switched telephone network; and the possibility exists that an emergency call could be blocked. Provision of universal access (dedicated trunks statewide) and enhanced features such as ANI have been recommended as a benchmark by the Department of Administration's 9-1-1 Advisory Council.

# Section 2

## ***Enterprise Strategic Planning Initiatives***







# ***ENTERPRISE STRATEGIC PLANNING INITIATIVES***

---

## **INTRODUCTION**

Through enterprise strategic planning, the enterprise organization manages and sets direction for the State of Montana's information technology architecture (ITA). In the past biennium, ITAC, SEC, ITMG, ISD, and agency IT organizations have addressed several major enterprise ITA issues. Through their combined efforts, they have made great progress toward solidifying the ITA and moving Montana into the 21<sup>st</sup> Century. The results of these efforts have been realized through the creation of *Legislative*, *Executive*, and *Management* task forces, subcommittees, and advisory groups.

---

## **LEGISLATIVE INITIATIVES**

Two major legislative-level initiatives resulted in the creation of the Joint Interim Committee on State Management Systems (SJR 23) and the Governor's Blue Ribbon Telecommunications Task Force (BRTF). Each is discussed below, and their respective memberships are provided in *Appendix A*.

---

### **Senate Joint Resolution No. 23**

Senate Joint Resolution No. 23 called for an interim Committee to present the 55<sup>th</sup> Legislature and the Governor with a report that included:

- ▲ options for the general revision of the laws governing state fiscal and personnel management, and
- ▲ an estimated schedule by which a transition to fully integrated, automated, asset management systems could be effected (along with an assessment of legislative actions required to support the schedule).



The approach taken in gathering and preparing information for the study was to charter three separate task forces: Accounting, Budgeting, and Data Management. The mission statements for each of these task forces are described below:

## **Task Force Mission Statements**

**Accounting Task Force.** The mission of the Accounting Task Force was to examine the subjects comprising state accounting, purchasing, and tangible personal property within the context of and for the purposes stated in SJR 23, and to assist the Committee by identifying options and proposing recommendations for consideration by its members. Recommendations should include proposed implementation schedules and budget needs wherever applicable.

**Budgeting Task Force.** The mission of the Budgeting Task Force was to examine the subjects comprising state budgeting, revenue estimating, and personnel within the context of and for the purposes stated in SJR 23, and to assist the Committee by identifying options and proposing recommendations for consideration by its members. Recommendations should include proposed implementation schedules and budget needs wherever applicable.

**Data Management Task Force.** The mission of the Data Management Task Force was to examine the subjects comprising the use of management information and information systems by state managers, the intergovernmental integration and coordination of systems, and to assist the Committee by identifying options and proposing recommendations for consideration by its members. Recommendations should include proposed implementation schedules and budget needs wherever applicable.

## **Task Force Recommendations**

In August 1996, the Committee took action on recommendations from the three task forces. In total, the task forces made 22 recommendations. With some minor revisions, the full Committee adopted 21 of the recommendations. Included among the major recommendations are:

- ▲ The Department of Administration should hire a consultant to provide long-term, architecturally and technologically sound options for reengineering the state's financial management systems. The options should include flexibility to accommodate future changes in the state's infrastructure and/or strategic initiatives as state government changes. The contract should provide for delivery of a comprehensive report prior to the 1997 legislature convening, and be used as the basis for Executive Branch (appropriation) recommendations. (This effort, called the MT PRIME project, is underway.)
- ▲ The 1997 legislature should establish an ongoing interim subcommittee, consisting of members of the Legislative Finance and Audit Committees, to provide oversight

between the next three legislative sessions. The subcommittee would receive status reports from the Department of Administration regarding the reengineering effort and address information technology issues facing state and local governments. (Draft legislation is available for review.)

- ▲ The legislative leadership, with consultation and recommendations from the Legislative Finance Committee, should establish a distinct process to consider/review enterprise technology issues (including funding initiatives related to information technology) separate from the regular subcommittee process and should be initiated early in the 1997 legislative session or even prior to the session convening.
- ▲ The legislature should adopt statutory changes to revise budgeting statutes to provide general guidance and flexibility in budgeting while maintaining accountability and control; eliminate obsolete language; and generally modernize the budgeting statutes. (Draft legislation is available for review.)
- ▲ The Department of Administration, with consultation from ITAC, should adopt goals for a new budget system and endorse the redesign efforts of the Office of Budget and Program Planning (OBPP) and the Legislative Fiscal Division (LFD).
- ▲ The Committee acknowledges the importance of revenue collection and other “single agency” systems, and that these systems should be included in any long-range system integration plan, with emphasis placed on those that must interact with major statewide management systems.
- ▲ The Committee agreed that the interface of state personnel systems with the Statewide Budget and Accounting System be improved; that online access to information and reports be improved and expanded; and that improvements be made to transactions to allow more decentralized maintenance of information. Particular emphasis should be placed on improvements to the position control portion (of P/P/P), including developing a temporary, replacement position control.
- ▲ The Department of Administration should complete a study to redesign or replace the P/P/P system with a human resource system integrated with other financial management systems. The integrated systems should provide decision guidance to agency managers and flexible access to a variety of employee information, and provide central policy makers with accurate, reliable, and timely data to enable audit and analysis of pay practices and budget management.
- ▲ The Department of Administration, with consultation from the Information Technology



Advisory Council (ITAC), should develop and adopt Information Management Principles for managing data as a state resource. These Principles should embrace data policies and standards, application development and management, data access, IT standards, data integrity and security, and data sharing.

- ▲ The Department of Administration should undertake a study of the utility and cost-effectiveness of the concepts of an enterprise-wide Information Resource Management Plan for state systems.
- ▲ The Department of Administration should complete a study to determine the applicability and potential for the adoption of an enterprise-wide Information Resource Management Program. If determined practical and appropriate, the Department should develop a plan, with cost estimates, to implement the Program.
- ▲ The Information Services Division (ISD) should develop and maintain a database (inventory) of state applications that describes the state's applications, gives the cost of development and maintenance, gives FTEs assigned to application maintenance, describes the platform on which the application is running, and describes how each application integrates with other systems, etc.
- ▲ ISD should identify common agency administrative applications or functions that could be developed as an enterprise-wide application, such as inventory, personnel, pre-payroll, procurement, etc.
- ▲ Interagency and intergovernmental partnerships and agreements should be created for developing shared (software) applications. A process for implementing this recommendation should be developed by ISD and presented to ITAC for review and discussion.
- ▲ ISD, other agencies, and local governments should continue to research emerging technologies and develop strategies and cost benefit analyses for utilizing these technologies enterprise-wide. This research and the strategies developed should be presented to ITAC and the Information Technology Managers' Group (ITMG) for review and discussion.
- ▲ The legislature should consider creating the capacity for and a forum for local government interaction with the state's IT enterprise. (Draft legislation is available.)

---

## Governor's Blue Ribbon Telecommunications Task Force

The Governor's Blue Ribbon Telecommunications Task Force (BRTF) was authorized by the 1995 legislature to examine Montana's telecommunications infrastructure. The BRTF's scope and purpose were incorporated into House Bill 460 which recognized that:

"access to advanced telecommunications services is essential to ensure continued economic growth, Montana's competitive position in the global market, and a superior quality of life for Montanans."

The BRTF's charge was to develop recommendations to ensure the implementation of policies, practices, and statutes regarding access to advanced telecommunication services.

The BRTF has made recommendations to address the issues created by the passage of the Federal Telecommunications Act of 1996. The Act recognized that the technologies and economics of the telecommunications industry have changed rapidly in recent years. Its passage and implementation, through the FCC rule-making process, promise only that the telecommunications industry's regulatory, technological, and economic environment will experience continued dramatic change in the future.

The BRTF has developed numerous recommendations in an effort to encourage the transition to a robust, competitive, telecommunications marketplace, and remove barriers to competition and disincentives to investment in telecommunication deployment and use. A summary of these recommendations is provided in *Appendix B*.

---

## EXECUTIVE INITIATIVES

ITAC has addressed several issues and recommendations through the creation of four executive-level task forces and an advisory group. These include the Coordination; Access and Privacy; Geographic Information Systems (GIS); and Internet Policy and Services Advisory task forces and the SummitNet Executive Council (SEC).

---

### 1996 ITAC Strategic Planning

Through ITAC, the state initiated a major IT strategic planning effort in 1993. The process



culminated in the publishing of the *Information Technology Strategic Plan* in July 1994, in which 31 issues and recommendations are identified. In February 1996, ITAC completed an interim strategic planning session during which new issues and recommendations were identified and prioritized, and options for addressing them were presented. The following are the top seven issues and recommendations selected by ITAC for further consideration:

### **Minimum Level of Technology**

A minimum level of technology would be specified for State agencies to use when acquiring hardware and software. This would enable agencies to participate in the enterprise and thus have access to a broad range of state-wide computing resources. The specifications would be written with the goal of providing employees with the necessary resources to accomplish their jobs in the most efficient manner, including training. The specifications would be "guiding principles" rather than structured as a requirement. They would only describe the minimum levels necessary to participate in the enterprise and would not interfere with an agency's flexibility to exceed the minimum in order to meet program needs.

### **Planning and Pace of IT Change**

The State should adopt a management model and associated methodology that can deal with the rapid pace of technological change. The methodology should be able to quickly capitalize on changes where appropriate to meet the information needs of internal State operations and public citizens. The methodology should provide a proactive means to adapt to rapid technological changes through planning rather than reacting to changes in technology forced by obsolescence and other changes forced upon the state's environment. The methodology should incorporate a process to adapt to change fast enough to employ new technology as soon as it is available, provide agency flexibility to use variations of the technology that meet agency requirements, enhance inter-agency communications on selection of new technology, and foster sharing of expertise within agencies. The methodology should encourage the establishment of legislative mandates that permit appropriate flexibility, with a focus on the informational needs being satisfied rather than the use of a particular technology. The methodology should also incorporate a mechanism to educate legislators and agency management on the benefits of the new technologies.

### **Enterprise Electronic Commerce Strategy**

The state should capitalize on opportunities for the use of electronic commerce. Electronic commerce technologies should be shared among agencies with ISD serving as a clearing house for emerging federal requirements, including ANSI standards, and other policies and standards that affect the implementation of electronic commerce. Electronic commerce should be implemented with the necessary goals of appropriate security, privacy, and preserving necessary audit requirements of the various agency programs.

## **Continued Development of SummitNet**

SummitNet development should continue. SummitNet should be deployed so that it facilitates and encourages collaborative work settings. It should also be deployed so that it functions as an "attachment" to the Internet, providing an integrated view of SummitNet and Internet services to users so that distinctions between the two are minimized. Telecommunications deregulation legislation should be assessed, as to its impact on SummitNet, on an ongoing basis as it occurs.

## **Enterprise Internet Strategy**

The state should adopt an Internet deployment strategy. ISD should take a proactive role in coordinating a state-wide effort to define the appropriate capabilities, minimum standards, policies, security and capacity requirements, and support responsibilities applicable to the state's particular environment. The appropriate inclusion of Internet as part of a greater body of technology for access to the enterprise should be determined. ISD should also establish an ISD web site. Similar to the continued development of SummitNet, the particular way the state deploys Internet services should also provide an integrated view of the Internet and SummitNet to users so that distinctions between the two are minimized.

## **Reengineering the Delivery of Services Through IT**

ISD should coordinate a state-wide effort to evaluate the feasibility of a state-wide contract for business process reengineering (BPR) services, which would include BPR education for agencies. The potential for partnerships with private entities should be evaluated with any BPR undertakings.

## **Integration of Management Information Systems**

State systems should be evaluated as to their potential for integration. Related concepts (data sharing, etc.) and techniques (data warehousing, etc.) should be incorporated into agency undertakings. The effort should in part be based upon an assessment of the conclusions reached by the SJR 23 Committee. The impact of the state's classification system should be addressed. An appropriate balance/use of integration and interfaces should be considered in all endeavors.

---

## **Coordination Task Force**

The subjects addressed by the ITAC Coordination Task Force included: Equal Access — Minimum Level of Technology; Personnel Support Services; Governance — The ITAC and Information Technology Managers' Group (ITMG) Relationship; and the "IT Services Options Analysis and Recommendation" document.

## Equal Access — Minimum Level of Technology

There were short- and long-term components of this issue. The short-term related to investigating the feasibility of changing existing surplus-property mandates to facilitate interagency exchange of IT resources, in particular, older personal computers. The task force determined that there were no statutes, policies, or procedures that impeded the transfer of IT equipment between agencies. The fact that there are few equipment transfers currently occurring is due to cannibalization of equipment before it is surplus, and the reality that most equipment being surplus is too obsolete to be useful.

The long-term aspect of this issue dealt with developing a plan that would allow every agency to achieve a "minimum level of technology" by the year 2000. Included in that charge were defining a minimum hardware configuration and identifying the costs and funding alternatives associated with achieving that level.

The task force recommendations, adopted by ITAC in May 1996, are as follows:

- ▲ ITAC recommends the creation of a pilot project that would run through December 31, 1996. The goals of the pilot would be to:
  - 1) educate state personnel (through ISD's *News & Views* and Purchasing's newsletter) that transfers of intact IT equipment are possible and a good idea, and
  - 2) advertise used IT equipment availability through ITMG, *News & Views* and the state BBS.
- ▲ ITAC recommends that the state adopt, as a *target* platform for desktop LAN workstations, the preferred minimum-technology level defined below:
  - 1) a 100-MHZ Pentium processor,
  - 2) with 16 MB of memory,
  - 3) a 1-GB hard drive,
  - 4) a 15-inch SVGA monitor, and
  - 5) at least one 4X CD-ROM per workgroup.
- ▲ ITAC recommends that the state implement, via a single EPP proposal, an enterprise-wide plan for a hardware and operating system upgrade of those PCs that are currently

below the preferred minimum level and are identified, by agency management, as needing to fully participate in the enterprise. ITAC recommends that funding for this initiative occur through a debt financing mechanism.

- ▲ ITAC recommends that state agencies adopt a life-cycle approach to managing IT assets. This approach includes identifying regular replacement schedules for equipment and incorporating replacement costs as an ongoing budget item. Definition of IT equipment life cycles and replacement schedules would be at the discretion of individual agencies.
- ▲ ITAC recommends that ISD be available as an agency resource during legislative sessions to actively lobby in support of technology requests deemed essential to enterprise participation. Likewise, ITAC members should be available to lobby on behalf of ISD requests that are important to the enterprise.

## Personnel Support Services

The task force's charge in this area was to make recommendations on the appropriate means of acquiring IT personnel support services. The inquiry included examination of: the nature of IT support currently provided and needed; centralized vs. decentralized IT support; the suitability of state agency vs. ISD vs. the private sector as the support provider; as well as recruiting, retaining, training, and pay issues. The following were the task force recommendations adopted by ITAC in July 1996.

- ▲ ITAC recommends that the state pursue goals of multi-agency sharing of LAN servers, and sharing of IT support resources, through the initiation of a pilot-project feasibility study. The Department of Justice would be the lead agency, and Billings would be the preferred location. Among the issues that the pilot should address are: governance, administration, security, and cost sharing.
- ▲ ITAC recommends that the NetWare Managers' Group (NMG) serve in an advisory capacity for an enterprise initiative to share LAN servers. This responsibility should include recommending procedures for: identifying sharing opportunities; resolving logistical issues associated with inter-agency sharing; and ensuring that proper consideration is given to opportunities to share resources.
- ▲ ITAC recommends that ISD inventory the IT support requirements of state agencies in each of their non-Helena locations; explore alternative service providers and associated costs; and make recommendations back to ITAC.
- ▲ ITAC recommends that ISD establish an online, resource "clearinghouse," wherein

agencies can post the travel plans of support personnel, as well as any other opportunities to share resources (e.g. training).

- ▲ ITAC endorses ISD's current organizational flexibility that allows it to respond to enterprise IT support needs at the central service agency level.
- ▲ ITAC recommends that the state communicates the IT knowledge and skills needed within state government to the University System as useful information in formulating course curriculums.

### **Governance — The ITAC and ITMG Relationship**

The task force's responsibility in this area was to clarify the relative roles of ITAC and ITMG, formally document the relationship, and ensure that good communications continue between the two bodies. The final report, which was adopted by ITAC in February 1996, includes the following recommendations:

- ▲ Use existing administrative authority at the Department of Administration to formalize the existence of ITMG; its purpose, authority, and responsibilities; and its relationship to ITAC.
- ▲ Formally define and document the relationship between ITAC and ITMG on the basis that ITAC is an executive-level group dealing primarily with policy-level directives; whereas, ITMG members are the agency IT managers who provide recommendations to their agencies' ITAC members and deal primarily with the implementation of statewide IT directives.

### **"IT Services Options Analysis & Recommendation" Document**

At the Governor's request, the Office of Budget and Program Planning (OBPP), in cooperation with state agencies, conducted a review of more than 170 areas within state government where the introduction of competition could potentially lead to improved services and reduced costs. OBPP targeted 19 areas for further review, including the range of IT services currently provided by the Information Services Division (ISD). The OBPP was specifically interested in examining the feasibility of providing IT services through a public-private corporation partnership model, such as is currently in use by the City of San Diego and its wholly-owned, non-profit subsidiary, the San Diego Data Processing Corporation (SDDPC).

ISD was asked to perform its own analysis of this possibility, and that effort resulted in the "IT Services Options Analysis and Recommendation" document. ISD chose to expand the scope of its inquiry, beyond the SDDPC model, to look at a full range of organizational structures for providing IT services. Nine alternatives, ranging from the status quo to a private corporation/

wholly-owned subsidiary, were identified and studied.

ISD's analysis weighed the ability of each option to: meet division goals and objectives; retain current strengths; and remedy current weaknesses. In addition, the decision factored in: an analysis of trends within other state governments; a comprehensive look at the San Diego model; and a review of the impact on unions.

The alternative recommended by ISD would elevate ISD to a department level and create an IT commission (ITC) that would have formal authority to direct the policy-level activities of the enterprise. This alternative is consistent with the Chief Information Officer (CIO) model. The ITC would replace ITAC and the SummitNet Executive Council (SEC). This alternative received the highest composite score when measured against the criteria of meeting goals and objectives, retaining strengths, and addressing weaknesses in the ISD analysis.

The IT Services document was presented at the July 1996 meeting of ITAC, where it was subsequently referred to the Coordination Task Force for review and recommendations. In addition to its own internal deliberations, the task force actively solicited the comments of the general membership of both ITAC and ITMG. While these forums highlighted the fact that there was little agency support for ISD's recommendation, the task force felt that ISD's analysis identified legitimate problem areas that could be addressed by means other than creating a new department. The task force presented the following recommendation at the September 1996 ITAC meeting, which was subsequently adopted by the group.

- ▲ ITAC does not endorse the recommendation of the IT Services document that ISD be elevated to a department level, with an Information Technology Commission (ITC) that would have formal authority to direct the policy-level activities of all agencies within state government.

The task force continues to study the following areas, identified by ISD as major weaknesses: the lack of flexibility available when deciding personnel issues such as compensation; procurement; budget; new service limitations; and elevating the IT decision process.

---

## Access and Privacy Task Force

The Access and Privacy Task Force was re-formed in August 1995 with the mission of fulfilling the following recommendations found in the 1994 *Information Technology Strategic Plan*:

1. The state should adopt an aggressive policy regarding the use of technology to provide



access to services and current and retrospective information with appropriate regard for budgetary considerations.

2. The state should actively participate in and use manifestations of the electronic data superhighway.
3. In order to provide the greatest access, while guarding individual privacy, the state should review and revise all statutes and policies that might be viewed as impediments to access to state IT resources.
4. The state should pursue the use of IT as a means for service delivery including: use of electronic transactions (EDI, EFT, EBT) and coordinated, integrated access from a variety of convenient locations.
5. The state should adopt a policy regarding fair information practices, clearly stating information privacy policies and practices.
6. The state, through the Department of Administration and cooperating state agencies, should adopt a policy defining state agency personnel responsibilities regarding communications privacy and the access and use of information that might be intercepted in the course of performing IT services.
7. Develop policy guidelines to establish either free access or access with a service charge. Criteria would include whether the access provided is an inherent part of the general mission of the organization or whether the access is for the private benefit of the person requesting it, along with the degree to which the public and private good involved can be distinguished.
8. Recognize the important traditional role of third-party information and service providers and embrace appropriate, nonexclusive implementations of those relationships in the electronic information age.
9. State government should take a proactive stand regarding the deployment of high capacity switched data transport capability on the public communications network in Montana.
10. The state should adopt a vision that is flexible and responsive to citizen needs and demands, a vision that would guide information technology planning and development to take advantage of current and future service delivery and/or access technologies for citizens in their homes, businesses, schools, libraries, and organizations.

A draft "Aggressive Use" policy has been sent to ITAC for review and fulfills Recommendations One, Four, and Eight. The policy states that:

"The goal of aggressively using IT to provide citizen access to information and state services will be realized through the state's anticipating and valuing the role of information technology and through progressive, continuous, and appropriate information planning, information resource management, policy development, systems and infrastructure development, employee and user training, research, procurement, and partnering with third-party service providers. State government administrative and political leadership are responsible for accomplishing the business mission and goals (one being citizens' access to state services and information) through effective and efficient use of state resources."

A draft "Transmission Privacy" has been sent to ITAC for review and fulfills Recommendation Six. The policy states that:

"An employee, agent, or contractor of the State of Montana may only intercept transmissions, or an electronic communication carried or stored on any state telecommunications network or state-operated local-area networks, when such interception is in the normal course of that person's employment responsibilities and is regarded as necessary to providing the state's electronic communication service or protecting the rights and property of the State of Montana. If an employee, agent, or contractor of the State of Montana is discovered in the improper use of state electronic communication resources they shall be subject to discipline up to termination."

A draft "Vision Policy" is currently being developed and will fulfill Recommendation 10. The policy states that:

"All citizens, regardless of educational level, special needs, economic status, or demographics will have access to information and state services — as long as this access does not violate state statutes related to the citizen's right to privacy. The State of Montana will bring about this access through the elimination of access barriers (physical, organizational, infrastructure, data, applications, fiscal); progressive information technology planning and implementation; legislative budgetary commitment and support; the use of best practices; and continuous performance measurement. Implementing the Vision for Citizen Access will be provided through: Equal Access; Universal Access and Opportunity; State Bulletin Board and Internet Access; Value-



Added Services; Strategic Planning; the State Communications Network; Information Resource Management (IRM); and Fair Information Practices."

Recommendation Two is being addressed by ISD, agencies, and the University System through the development of Internet Home Pages, and the exploration of the business and electronic-commerce benefits of using the Internet. Recommendations Three, Five, and Seven are currently under ITAC consideration, and Recommendation Nine has been referred to the SummitNet Executive Council (SEC).

---

## **GIS Task Force**

ITAC approved the formation of the GIS Task Force in its July 11, 1995 meeting. Approval of the Task Force reflects the importance that ITAC places on the benefits that GIS technology can offer the State of Montana. ITAC recognizes the need to take an active role in establishing statewide GIS directions and standards.

The GIS Task Force's mission was to recommend directions that facilitate the effective use and implementation of GIS technology statewide. The following objectives were identified for supporting this mission:

- ▲ Assess and document Montana's current GIS environment and identify future plans for using GIS.
- ▲ Review existing GIS standards and recommend to ITAC the approval of appropriate standards.
- ▲ Identify and prioritize GIS issues and concerns needing in-depth study.
- ▲ Recommend options ITAC should consider for establishing statewide GIS directions.

Early on, a decision was made to conduct a GIS survey across all levels of government. The intent was to gather information related to GIS programs throughout Montana. The Task Force used this information to help identify issues and recommendations for submittal to ITAC.

The Task Force identified GIS needs that members felt would support its assigned mission and objectives. The following needs were documented:

- ▲ There is a need to establish statewide GIS policies related to funding arrangements,

legal issues, inter-entity relationships, and standards.

- ▲ There is a need to establish a statewide GIS framework. This would include support for issues affecting GIS data sharing, data coordination, data access, data collection, and data maintenance.
- ▲ There is a need to implement GIS in an effective manner. This includes identifying GIS users, serving GIS users, supporting GIS practitioners, and planning strategically for the growth of GIS.
- ▲ There is a need to align GIS needs within the context of ITAC's Information Technology Strategic Plan.

The Task Force submitted the "Report of GIS Technology Directions, Implementation, and Use" to ITAC in July of 1996.

## Internet Policy and Services Advisory Task Force

In February 1996, ITAC created the Internet Policy and Services Advisory Task Force with the goal of developing Internet policies for the enterprise. The Task Force is comprised of agency staff and ISD personnel.

The Task Force has been guided by four important factors:

- ▲ Internet/Intranet issues are inseparable and must be dealt with concurrently. As viewed by the Task Force, Intranet is expansion of the backbone and eventual implementation of SummitNet; whereas, the Internet encompasses the national/international network.
- ▲ The desire held by certain state agencies to provide Internet and Intranet users easy access to agency information. These agencies wish to publish and advertise externally and internally.
- ▲ The concern held by certain state agencies to ensure proper security of their data for Internet and Intranet access. These agencies manage sensitive data that require restricted access.
- ▲ The desire of the Task Force to preserve the security of the enterprise computing



facilities, while acknowledging the productive functionality and agency use of the Internet.

When planning what Internet/Intranet services to provide, or use, state agencies need to:

- ▲ Evaluate and assess those choices in light of the agency's mission (i.e., does the agency have a mission to provide information, or manage and protect information).
- ▲ Identify the desirable extent of Internet access to its site (i.e., limited to other employees within the agency, other state agencies, other public agencies, or open to the Internet at large).
- ▲ Identify the extent of secure or confidential data or processes and take proper steps to ensure the protection of those data and processes.

The Task Force has drafted initial policy statements for: Browser; TCP/IP Stack; FTP Client; FTP Server; Enterprise Firewall; Training; and Web Server.

---

## **SummitNet Executive Council**

The SummitNet Executive Council was created in July 1995, by Executive Order of the Governor, to provide policy-level direction for matters relating to SummitNet, including the following:

- ▲ The Council shall provide a governance structure of shared authority within the existing statutory framework regarding management of telecommunication networks.
- ▲ The Council shall exercise broad authority for strategic decision making with regard to SummitNet. This authority shall include: policy development, participation (identification of entities allowed to use SummitNet), financial planning, strategic planning, cost-recovery planning and policies, appropriate use policies, development and evaluation of new networking technologies, and other issues relating to SummitNet.

SEC actively participated in the RFP process through which a successful SummitNet contract was established with US West and IBM; developed the SummitNet Acceptable Use Policy; established TAG (Technical Advisory Group) to address technical issues for SEC review; and developed SummitNet rate structures for government, educational, and non-state entities. SEC continues to assess users' needs and develop appropriate governing policies. See *Appendix A* for a listing of the SEC membership.

---

## Year 2000 Compliance

The scope of the Year 2000 challenge spans the entire IT industry. The phenomenon exists because for decades it has been common practice to use two digits instead of four when writing computer program dates. However common this practice, it causes computer software performing arithmetic operations, making comparisons, or sorting data fields to yield incorrect results when working with years beyond 1999. In addition to computer software program failures, computer hardware is also susceptible; mainframes and PCs contain system clocks, relating to operating systems, that are likely to fail depending upon how system date parameters are defined.

ISD has assumed the central coordination role in developing an enterprise Year 2000 compliance plan. In an effort to assess the impact of Year 2000 upon state agencies, a survey was distributed to ITAC in September 1996 with the objective of gathering preliminary information to be used in the development of the compliance plan. That plan's purpose will be to ensure that the state is prepared for Year 2000, and that all computer hardware and software are compliant. At a minimum, this will involve the following:

- ▲ **Awareness.** Provide information to management and staff regarding the scope of impact of the Year 2000. This should include identification of issues beyond data management.
- ▲ **Inventory.** Develop a full inventory of hardware and software (internally and commercially developed), data, and equipment and determine its Year 2000 compliance.
- ▲ **Impact Analysis.** Determine the impact of noncompliant resources. Define whether problems are fatal, critical, or marginal.
- ▲ **Plan.** Determine the appropriate action on each system (change/add or replace) and whether policies and practices for IT acquisition, data administration, and file and database design should be developed. Develop a plan to convert/replace, test, and implement the recommended actions.

---

## MANAGEMENT INITIATIVES

Two management-level subcommittees have been created in the past biennium that support



the development and implementation of enterprise initiatives. These include ITMG's Imaging Subcommittee and E-Mail Subcommittee.

---

## **Imaging Subcommittee**

The mission of the ITMG Imaging Subcommittee was to establish and promote progressive, efficient imaging and document-management-technology policies and standards to facilitate the implementation of cost-effective imaging and document management technology. The subcommittee's goals included the following:

- ▲ Develop a plan for implementing approved imaging and document management technology.
- ▲ Develop, publish, and implement Imaging Standards for the State of Montana.
- ▲ Implement a centralized imaging system for small to mid-sized agencies.
- ▲ Continue to develop expertise in imaging and document management technology, including learning and documenting private-sector trends and Montana's current environment related to imaging and document management technology.
- ▲ Develop a vision for the state using imaging and document management technology to make government more efficient.

The Imaging Subcommittee published and distributed *State of Montana Electronic Imaging Standards*. Its membership continues to meet to stay abreast of technology and to guide agencies in the procurement and implementation of imaging and document management technology.

---

## **E-Mail Subcommittee**

ITMG established the Operating Systems/E-Mail Subcommittee in August of 1995. The purpose of this project, as defined in the original charge statement of the subcommittee, was to establish an e-mail strategy for the state. Two main factors facilitated a need to address the future of the state enterprise e-mail direction:

- ▲ Attachmate Corporation is not actively supporting ZIP!Mail/ZIP!Office products.
- ▲ SummitNet is being deployed statewide to replace the legacy IBM Systems Network Architecture (SNA) network with a multi-protocol, routed, TCP/IP-based network.

The committee's goals included the following:

- ▲ Identify and quantify the probability of change in other strategies/standards that would impact or influence e-mail decisions.
- ▲ Identify emerging technologies that might impact or influence e-mail decisions.
- ▲ Identify stakeholders/scope.
- ▲ Identify functional and technical requirements.
- ▲ Identify potential vendors/products.
- ▲ Develop an acquisition plan.
- ▲ Develop an evaluation plan.
- ▲ Perform an impact analysis.
- ▲ Develop a migration plan.

The following is a summary of the key recommendations and considerations:

- ▲ The scope must include state agencies, and it should allow other SummitNet users (local government, schools, libraries, etc.) to participate if they elect to do so.
- ▲ Provide for central e-mail architecture and directory administration while allowing for decentralized address administration.
- ▲ Must support Windows (3.x, 95 and NT) and Web browser clients; Unix client support is desired, but DOS and 3270 client support are not required.
- ▲ As a client/server application, it should be targeted to the mid-tier server platform (Unix and NT), but it must also co-exist with our LAN and mainframe platforms.

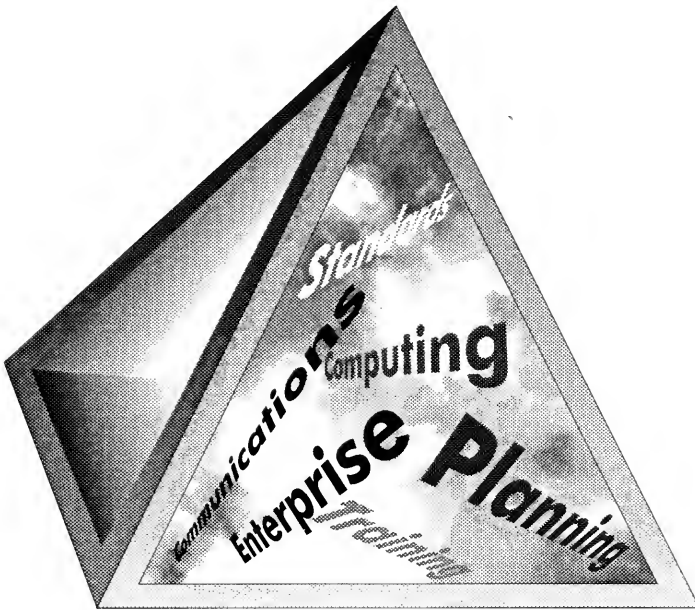


- ▲ High value should be placed on open standards such as SMTP/MIME, LDAP and X.500 as well as on a vendor's commitment to open standards.
- ▲ Selection of an e-mail/scheduling solution must include groupware.
- ▲ The vendor and product choice must be viewed as a strategic long-term investment with more emphasis placed on corporate qualifications than on current features or cost.
- ▲ The state must select a single strategic solution that is uniformly deployed throughout state government agencies.

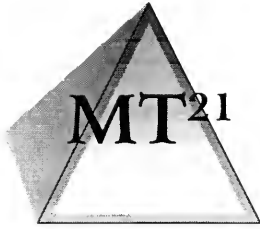
Based on the subcommittee recommendations, a Request for Proposal (RFP) is being developed during FY97 as part of a plan to select a state standard e-mail/groupware product by early FY98.

# **Section 3**

## ***ISD, Agency, and University Information Technology Plans***







# ***ISD, Agency, and University Information Technology Plans***

---

## **INTRODUCTION**

This section presents, in the following order, ISD's information technology (IT) plans; the IT plans for the agencies and the universities; and a project profiles table. The IT plans detail each organization's mission, major IT projects for FY98-99, the business goals those projects support, and accomplishments from the last biennium. Where possible, FY00-01 IT initiatives are also provided.

The project profile table contains IT project details related to platform type, implementation schedules, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that were able to provide such detail about their FY98-99 IT projects are listed alphabetically within the table, with each followed by its project profiles.

Montana's agencies and the university system use IT for streamlining internal processes and for providing efficient, cost-effective, and appropriate public services and educational opportunities. Each agency is responsible for establishing its own information technology goals, objectives, and plans. But to ensure network and statewide IT strategic plan conformance, agencies work with ISD when procuring hardware, software, and private-sector services. The universities are also responsible for establishing their own information technology plans.



## ***Computing Operations Bureau***

### **Mission**

The mission of the Computing Operations Bureau is to provide reliable, effective, and efficient centralized computing services to state agencies and other government units 24 hours per day, seven days a week. The Bureau consists of two sections: Production Services and Production Support. Production Services is responsible for the ongoing operation of mainframe and centralized mid-tier production computer configurations. This section is always focused on accommodating the growing automated workload demands of state agencies. Production Support is responsible for configurations; operating systems and maintenance; network interface support; methods/media management; and centralized security administration.

These sections provide professional computer operations support services; develop training curriculum; provide problem and change resolution in support of current software products; evaluate and install new software and hardware products; and determine the methods and use of software products by state employees. In addition, this Bureau is continually seeking innovative means to make the state's mainframe and shared mid-tier configurations more compatible and compliant with the growing IT processing needs of state agencies.

### **Achieving Business Goals Through IT Initiatives**

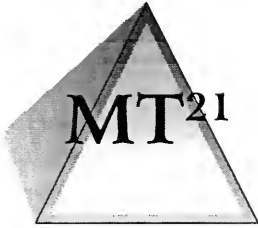
<b>Business Goals</b>	<b>FY98-99 IT Projects</b>
Accommodate growth in computer workload.	Install mainframe processor upgrade.
Satisfy growing agency need for centrally administered, mid-tier computer services.	Expand mid-tier configuration.
Improve ease-of-use of mainframe computer.	Implement systems-managed storage and continue deployment of newer mainframe interface technologies.

Business Goals	FY98-99 IT Projects
Reduce labor-intensity of mainframe configuration.	Continue deployment of automated operations methods and technologies.
Improve efficiency and price/performance of central data center; reduce customer service rates while accommodating workload growth.	Continue practice of purchasing used computer equipment at reduced prices.
Promote and facilitate a growing role, which the mainframe configuration can accommodate, in supporting agency migration toward more open systems and an enterprise-wide client/server environment.	Install Unix-compliant operating system, and client/server access and interface software tools.
	Implement secure data-warehousing technology.
	Expand mainframe TCP/IP connections into legacy systems.

### Accomplishments

- ▲ Upgraded ISD's mainframe computer to an IBM ES9000/832.
- ▲ Installed and configured a shared-use, DEC Alpha 4100, mid-tier, production computer configuration.
- ▲ Successfully conducted a comprehensive mainframe and network disaster-recovery test using the disaster recovery "hot-site" facility.
- ▲ Selected, procured, configured, and implemented an automated-report-distribution software system for mainframe customers. This system provides report packeting, indexing, customization, automated archiving, online viewing, and print interface to client/server.
- ▲ Completed conversion to a "cartridge" magnetic-tape storage system from a "reel" tape system.
- ▲ Upgraded mainframe storage and controllers to more current technology that enhanced performance by 45% while improving reliability.
- ▲ Implemented mainframe TCP/IP software that has enhanced communication between legacy mainframe applications and other computing platforms.
- ▲ Installed and customized enhanced system-monitoring software that provides better automated system-problem determination, increases ease of operation, and improves change control.

- ▲ Upgraded all operating-system software levels and installed new versions of COBOL and Visual Gen software.
- ▲ Implemented an automated job-scheduling system for mainframe customers.
- ▲ Implemented a laser-print mailer system using Moore Corporation's folder/pressure sealer technology. By reducing mail costs and the expense of special forms, significant agency savings have been realized, while significantly improving the quality of mail-ready computer printout.
- ▲ During FY96, accommodated an approximately 40% increase in computer workload, as compared to FY95 volume.
- ▲ Reduced FY97 customer service rates for production mainframe processing by 33%, as compared to FY96 rates.



# Policy, Development, & Customer Relations Bureau

## Mission

The mission of the Policy, Development, & Customer Relations Bureau is to develop computing and telecommunications standards and policies; promote technology development; manage the statewide 9-1-1 program; coordinate IT training offerings; provide division-wide customer relations; and coordinate state geographic information system (GIS) activities, including a governance structure for addressing GIS policy issues.

## Achieving Business Goals Through IT Initiatives

Business Goals	FY98-99 IT Projects
Initiate and coordinate, at the enterprise level, the development and implementation of statewide strategic directions.	<p>Participate on and facilitate ITAC, SEC, and ITMG task forces and subcommittees established to develop statewide IT direction, standards, policies, and guidelines.</p> <p>Identify areas of multi-agency interest where state standards and policies should be developed and initiate actions that lead to the establishment of those standards/policies. Standards and policies to be developed in FY98-99 are electronic commerce, Internet/Intranet, and document management.</p> <p>Prepare and publish the <i>2000-01 Information Technology Plan</i>.</p> <p>Study and develop recommendations for an information management strategy based on IRM (Information Resource Management), a concept for better managing data, applications, and technology.</p>

**Business Goals****FY98-99 IT Projects**

Enterprise information resource planning.

Work with ITAC in developing a process, timetable, and plan for managing the state's data, applications, and technology. The process would include strategic and long-range planning; the timetable would accommodate Legislative sessions; and the plan would involve the enterprise's documentation and discussion of the current environment, visioning, the development of a long-range IT action plan, and the measurement of results.

Develop computing and telecommunications policy.

Review and update all existing computing and telecommunications policy. Develop new policy as related to Internet, electronic commerce, imaging, wireless communications, and other emerging technologies.

Monitor IT trends and serve as an information resource for the enterprise.

Write, maintain, publish, and distribute white papers about emerging technologies.

Monitor federal, state, and corporate IT trends.

Monitor activities in the Telecommunications Act of 1996, the Montana Public Service Commission (PSC), and the Federal Communications Commission (FCC).

Monitor national regulatory issues related to public safety wireless communications.

Monitor the needs of ISD customers and use the feedback to improve the services ISD provides.

Ensure the state's IT environment is Year 2000 compliant.

Provide Year 2000 Compliance Project leadership.

Coordinate state GIS activities.

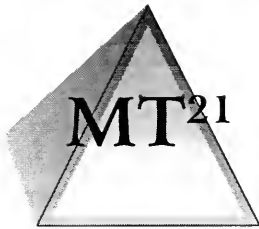
Provide coordination activities for state GIS, including a governance structure for addressing GIS policy issues.

Business Goals	FY98-99 IT Projects
Reduce labor-intensity of mainframe configuration.	Continue deployment of automated operations methods and technologies.
Improve efficiency and price/performance of central data center; reduce customer service rates while accommodating workload growth.	Continue practice of purchasing used computer equipment at reduced prices.
Promote and facilitate a growing role, which the mainframe configuration can accommodate, in supporting agency migration toward more open systems and an enterprise-wide client/server environment.	Install Unix-compliant operating system, and client/server access and interface software tools.
	Implement secure data-warehousing technology.
	Expand mainframe TCP/IP connections into legacy systems.

**Accomplishments**

- ▲ Upgraded ISD's mainframe computer to an IBM ES9000/832.
- ▲ Installed and configured a shared-use, DEC Alpha 4100, mid-tier, production computer configuration.
- ▲ Successfully conducted a comprehensive mainframe and network disaster-recovery test using the disaster recovery "hot-site" facility.
- ▲ Selected, procured, configured, and implemented an automated-report-distribution software system for mainframe customers. This system provides report packeting, indexing, customization, automated archiving, online viewing, and print interface to client/server.
- ▲ Completed conversion to a "cartridge" magnetic-tape storage system from a "reel" tape system.
- ▲ Upgraded mainframe storage and controllers to more current technology that enhanced performance by 45% while improving reliability.
- ▲ Implemented mainframe TCP/IP software that has enhanced communication between legacy mainframe applications and other computing platforms.
- ▲ Installed and customized enhanced system-monitoring software that provides better automated system-problem determination, increases ease of operation, and improves change control.

- ▲ Upgraded all operating-system software levels and installed new versions of COBOL and Visual Gen software.
- ▲ Implemented an automated job-scheduling system for mainframe customers.
- ▲ Implemented a laser-print mailer system using Moore Corporation's folder/pressure sealer technology. By reducing mail costs and the expense of special forms, significant agency savings have been realized, while significantly improving the quality of mail-ready computer printout.
- ▲ During FY96, accommodated an approximately 40% increase in computer workload, as compared to FY95 volume.
- ▲ Reduced FY97 customer service rates for production mainframe processing by 33%, as compared to FY96 rates.



# Policy, Development, & Customer Relations Bureau

## Mission

The mission of the Policy, Development, & Customer Relations Bureau is to develop computing and telecommunications standards and policies; promote technology development; manage the statewide 9-1-1 program; coordinate IT training offerings; provide division-wide customer relations; and coordinate state geographic information system (GIS) activities, including a governance structure for addressing GIS policy issues.

## Achieving Business Goals Through IT Initiatives

Business Goals	FY98-99 IT Projects
Initiate and coordinate, at the enterprise level, the development and implementation of statewide strategic directions.	<p>Participate on and facilitate ITAC, SEC, and ITMG task forces and subcommittees established to develop statewide IT direction, standards, policies, and guidelines.</p> <p>Identify areas of multi-agency interest where state standards and policies should be developed and initiate actions that lead to the establishment of those standards/policies. Standards and policies to be developed in FY98-99 are electronic commerce, Internet/Intranet, and document management.</p> <p>Prepare and publish the <i>2000-01 Information Technology Plan</i>.</p> <p>Study and develop recommendations for an information management strategy based on IRM (Information Resource Management), a concept for better managing data, applications, and technology.</p>

**Business Goals****FY98-99 IT Projects**

Enterprise information resource planning.

Work with ITAC in developing a process, timetable, and plan for managing the state's data, applications, and technology. The process would include strategic and long-range planning; the timetable would accommodate Legislative sessions; and the plan would involve the enterprise's documentation and discussion of the current environment, visioning, the development of a long-range IT action plan, and the measurement of results.

Develop computing and telecommunications policy.

Review and update all existing computing and telecommunications policy. Develop new policy as related to Internet, electronic commerce, imaging, wireless communications, and other emerging technologies.

Monitor IT trends and serve as an information resource for the enterprise.

Write, maintain, publish, and distribute white papers about emerging technologies.

Monitor federal, state, and corporate IT trends.

Monitor activities in the Telecommunications Act of 1996, the Montana Public Service Commission (PSC), and the Federal Communications Commission (FCC).

Monitor national regulatory issues related to public safety wireless communications.

Monitor the needs of ISD customers and use the feedback to improve the services ISD provides.

Ensure the state's IT environment is Year 2000 compliant.

Provide Year 2000 Compliance Project leadership.

Coordinate state GIS activities.

Provide coordination activities for state GIS, including a governance structure for addressing GIS policy issues.

Business Goals	FY98-99 IT Projects
<p>Provide procurement management for statewide IT acquisitions.</p>	<p>Review agency requests for hardware, software, and services.</p> <p>Identify IT procurement models used in the public sector and recommend future model(s) for the state that are consistent with efforts in procurement reform.</p> <p>Manage ISD contracts.</p> <p>Develop, issue, and evaluate procurement documents (RFPs, RFIs, and IFBs).</p>
<p>Administer Public Safety radio frequencies, policies, and procedures.</p>	<p>Develop and maintain state policies on the use and operation of public safety frequencies.</p> <p>Upgrade and distribute the <i>Mutual Aid and Common Frequencies — 1994</i> handbook.</p>
<p>Support state and local government entities in public safety communications, and wireless system applications and engineering.</p>	<p>Provide consultive service for general systems.</p> <p>Review and assist local entities in developing regional emergency communications plans.</p> <p>Continue supporting Public Safety Communications Task Force efforts in developing a shared public safety radio network.</p>
<p>Upgrade 9-1-1 networks to provide universal 9-1-1 access and advanced technologies.</p>	<p>Implement legislative change to provide dedicated 9-1-1 trunks and introduce advanced technologies such as enhanced 9-1-1 (E9-1-1).</p>
<p>Provide statewide coordination for disaster recovery planning.</p>	<p>Provide statewide direction for the development and execution of agency-specific business continuity and disaster recovery plans.</p> <p>Incorporate ISD and agency business continuity and disaster recovery plans with local government and university plans.</p>

## Business Goals

## FY98-99 IT Projects

Provide project management for state IT projects.

Coordinate the e-mail RFP process.

Develop an Enterprise Application Database that describes the state's applications in terms of platform type, costs, development language, emerging technologies used, and other attributes.

Facilitate the PC Subcommittee.

Study options on expanding the capacity of the Helena state capitol-complex switches and the State Telephone Network.

Manage the RFP process for the procurement of 22 intercity T1 lines for the state's dedicated telecommunications network.

Provide procurement management for key telephone systems for all state agencies.

Renegotiate the contract with WilTel Communications for the purchase and maintenance of CLI interactive video equipment.

Renegotiate or rebid the present contracts with AT&T and US West for commissions paid on revenues generated from pay phones located in or on state properties, and revenues generated from the prison inmate phone systems.

Participate in the capitol renovation project.

Provide project management and statewide coordination on the Department of Revenue's proposed GIS cadastral database project.

Investigate the use of cadastral data and other demographic databases for non-natural resource based GIS applications.

## **Accomplishments**

- ▲ Published the *1998-99 Information Technology Plan*.
- ▲ Facilitated the 1996 ITAC strategic planning effort.
- ▲ Analyzed the feasibility of restructuring ISD, and prepared two comprehensive reports in conjunction with the Governor's request to state agencies to explore opportunities for greater competition and/or for a cost effective means of providing state services.
- ▲ Managed the LAN Services RFI in response to an ITAC request to assess the potential of acquiring LAN support services from the private sector.
- ▲ Developed a Contract Management Database for computing and telecommunications contract administration.
- ▲ Researched emerging IT trends, established an ongoing reference library of information on emerging technology and state governments, and published white papers on data collection (bar coding) and multimedia technologies.
- ▲ Facilitated the development of statewide, electronic imaging standards.
- ▲ Published computing and telecommunications policies (SummitNet acceptable use, security, and access policies).
- ▲ Established ISD's Web site on the Internet.
- ▲ Worked with the Senate Joint Resolution Committee (SJR 23) in developing recommendations for integrating the state's asset management systems and for managing data.
- ▲ Supported the Governor's Blue Ribbon Telecommunications Task Force's efforts in the development of policy for advanced telecommunications services for the state.
- ▲ Supported the ITAC Coordination Task Force's efforts in developing recommendations for the following: Minimum Level of Technology; Personal Services; LAN Services RFI; ITAC/ITMG Relationship; IT Pace of Change; and IT Services Options.
- ▲ Produced the first complete publication describing ISD services.
- ▲ Broadened and improved the technical training curriculum available to the state, including new offerings in Oracle, customized NetWare training, and three levels of Internet training.
- ▲ Increased the number of students served by the State Training Program by 20%.

- ▲ Published the enterprise mid-tier computing standards.
- ▲ Increased 9-1-1 service coverage.
- ▲ Studied the feasibility of selling excess processing cycles on the state's mainframe.
- ▲ Performed long-range disaster recovery planning and executed a disaster recovery drill.
- ▲ Developed a draft of ISD's disaster recovery plan.
- ▲ Facilitated ITAC's GIS Task Force; published the "Report of GIS Technology Directions, Implementation, and Use."
- ▲ Established a GIS Services Section to support the state's GIS cadastral (property boundaries) project activities.
- ▲ Managed the RFP process and established a contract with US West and IBM to expand the statewide data network (SummitNet) using frame relay services.
- ▲ Managed the RFP process and established a contract with IBM to install and maintain intelligent hub (I-Hub) equipment on the state capitol complex fiber-optic backbone. Also established a term contract with IBM for the ongoing purchase of I-Hub equipment.
- ▲ Managed the RFP process and established a contract for the acquisition of key telephone systems for all state agencies.
- ▲ Managed the RFP process and established a long-term contract for cellular telephone services and equipment for all state agencies, as well as for state employees.
- ▲ Managed the IFB process and established a contract with AT&T to provide T1 service for the backbone network supporting frame relay services for SummitNet.
- ▲ Managed the RFP process and established a contract with Sprint for telecommunication relay services (voice and TDD/TTY terminals).
- ▲ Renegotiated contracts (with rate reductions) for long-distance services with AT&T, Sprint, and US West.
- ▲ Supported the Public Safety Communications Task Force (PSCTF).
- ▲ Managed the RFP process and established a contract to develop a Statewide Consolidated Communications System Concept Design.

- ▲ Obtained funding for consultive services for the Statewide Consolidated Public Safety Communications Concept Design, including writing and submitting the grant to the Montana Board of Crime Control (MBCC).
- ▲ Provided input to the Public Safety Wireless Advisory Committee (PSWAC) of the FCC/NTIA.
- ▲ Established term contracts for fixed-base-radio, mobile-radio, and radio-accessory-equipment.
- ▲ Converted Spectrum Management System (SMS) to a new PC environment, allowing for the integration of information databases.



## ***Systems Support Bureau***

### **Mission**

The mission of the Systems Support Bureau (SSB) is to support state agencies in their implementation and use of IT by providing: application system design, development, and support services; technical support services for software used by professional data processing staffs; technical support services for software and access technologies used by IT users; coordination and management of the selection of standard software applications; and emerging technology assessment and planning.

This Bureau includes three sections: Applications Development Support (ADS); End User Systems Support (EUS); and Systems Development Support (SDS). ADS supports the state's major financial systems (SBAS, P/P/P, Warrant Writer, and PERS), several agency systems, and ISD's business application systems. ADS also conducts feasibility studies and systems planning, and develops systems in both mainframe and client/server environments. EUS supports the operation of the enterprise electronic mail system, provides end-user support for the state standard desktop application products (including WordPerfect, Lotus, Freelance, and Windows), and provides support for public access to government information through the BBS and Internet services. SDS supports mainframe software (including CICS, IDMS, and other packages and utilities that support mainframe operation), and provides assistance to agency programmer/analysts using these products. SDS also provides database administration for the state's mainframe database management system (IDMS), and for the state's standard relational database management system (Oracle).

### **Achieving Business Goals Through IT Initiatives**

<b>Business Goals</b>	<b>FY98-99 IT Projects</b>
Facilitate agency participation in enterprise database development.	Provide Oracle tools and training.
Improve public access to state government information.	Provide resources for the development and maintenance of Internet services.

Business Goals	FY98-99 IT Projects
Improve government through IT implementation.	<p>Implement new enterprise electronic-mail system.</p> <p>Provide additional enterprise database developers (Oracle programmers).</p> <p>Provide local area network (LAN) administration for agencies.</p>
Support for information systems development.	<p>Assist and support the agencies in the use of systems development software and databases.</p> <p>Provide professional guidance and assistance in systems and database design and problem resolution.</p> <p>Provide a fully supported, current set of system software for access; systems development and support; and database management. Maintain current software releases and new releases and products.</p> <p>Design and review training curriculum for systems analysis, programming, and database management.</p>
Information systems development.	<p>Develop and support critical business application software for state agencies, including the Statewide Budgeting and Accounting System (SBAS); Payroll/Personnel/Position Control (P/P/P); Warrant Writer; Public Employees' Retirement System (PERS); ISD Administrative Systems; State Trust Lands Management System; FWP BAS; Secretary of State's Uniform Commercial Code (UCC) System; and Secretary of State's Corporation System.</p> <p>Provide a professional programming staff (available under internal services agreements) to design, develop, support, and maintain systems.</p>

Business Goals	FY98-99 IT Projects
Support for information technology users.	<p>Provide services that guide and support state agency selection and state employee use of standard hardware and software products, including developing training curriculum; assisting with current software and resolving associated problems; and evaluating new releases and products.</p> <p>Support standard desktop and mainframe software and products used by state employees.</p> <p>Implement and provide operational support for statewide enterprise electronic mail.</p> <p>Provide a state World Wide Web site on the Internet and a Bulletin Board System (BBS). Associated with these are managing the day-to-day operation and problem solving, and assisting and encouraging state agency use for providing public access to state government information.</p> <p>Provide, through internal service agreements, LAN administration for agencies.</p> <p>Design and review training curriculum for new end-user products (word processing and spreadsheets).</p>
Emerging technology assessment and planning.	<p>Research, evaluate, plan, and implement new technologies.</p> <p>Provide advice and assistance in the formulation of policy, standards, and guidelines for computing and data network products, capabilities, and use.</p>

## Accomplishments

- ▲ Established Oracle technical support service to assist and support the use of Oracle database and development tools. Assisted agencies in the implementation of Oracle software, established a users' group, and coordinated the development of appropriate training.
- ▲ Developed, through a collaborative ITMG effort, a desktop database development product standard (Lotus Approach).

- ▲ Developed, through a collaborative ITMG effort with ITAC approval, a direction for mid-tier processing, including operating system standards; established, as an inter-bureau project with Computing Operations, a shared central-processing facility.
- ▲ Developed, through a collaborative ITMG effort, a direction and plans for the implementation of Windows 95.
- ▲ Developed, through a collaborative ITMG effort, an electronic mail strategy.
- ▲ Provided an online communication link between the mainframe and Department of Revenue's AS400 for simultaneous update of each system.
- ▲ Developed a State of Montana presence on the Internet, via Montana Online.
- ▲ Developed, through a collaborative ITAC effort, policies for state agency provision of Internet services.
- ▲ Successfully completed the planning for the Secretary of State's reengineering project and commenced development of the project's first phase.
- ▲ Provided professional systems support services for the state's major financial management systems (PERS, P/P/P, SBAS, Warrant Writer, and PAMS), plus a variety of applications systems that support individual agency business, including ISD's billing systems. Incorporated the use of the Report Distribution System and Job Scheduler in many of these systems to improve agency access to reports.
- ▲ Developed several client/server applications to support ISD's business needs: contract management; call routing; e-mail administration; and ISD locator.
- ▲ Provided support to a growing number of e-mail users; during the last biennium, the number of users increased from 3000 to 4900.
- ▲ Provided software support to the users of mainframe online and batch applications.
- ▲ Upgraded CICS (the telecommunications access facility) and IDMS (the state's legacy database management system) to current releases.
- ▲ Implemented a "middleware" capability that allows access to legacy mainframe data from Oracle applications and/or access to Oracle databases from legacy mainframe applications.
- ▲ Provided technical leadership and support in the selection of a consultant for the MT PRIME project and participated in the project's analysis and planning phase.



# ***Telecommunications Operations Bureau***

## **Mission**

The mission of the Telecommunications Operations Bureau is to provide cost-effective and reliable voice, video, and data services for all state agencies, the University System, and other government units. The Bureau is divided, by function, into two sections. The Data Network Operations Section supports the state's local and wide-area network infrastructure including a campus fiber-optic backbone; a frame relay, multi-protocol, routed network; an SNA multi-drop network; the Novell Network Operation System; and the Network Assistance Center. The Voice Operations Section oversees the operations of the state's telephone switches, voice mail, integrated voice response systems, video systems, and the statewide telecommunications backbone network.

The Bureau provides first-level support for voice and data network problems; coordinates network add, move, and change activity; oversees multiple vendor contracts supporting the statewide telecommunications infrastructure; and provides network design and consultation to all state agencies.

## **Achieving Business Goals Through IT Initiatives**

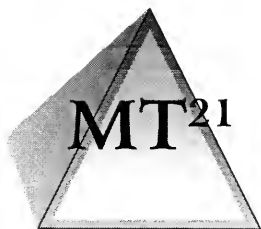
<b>Business Goals</b>	<b>FY98-99 IT Projects</b>
Satisfy the need for an enterprise network operating system.	Continue Novell 4.X implementation.
Satisfy increasing requirements for bandwidth and provide data, voice, and video integration.	Initiate ATM deployment.
Provide continued support of communications infrastructure.	Rewiring projects: the capitol building, the capitol campus, and remote sites.
Promote the use of video facilities for state, educational, and other entities.	Expand video capabilities.
Maintain the latest level of switching technology to take advantage of services offered by carriers.	Network switch upgrades.

Business Goals	FY98-99 IT Projects
Satisfy increasing needs to support the user base and infrastructure.	Expand Help-Desk coverage.
Satisfy agency requests for new, or replacement, telephone sets.	Normal station growth and replacement.
Continue to provide Internet-access carrier services.	Provide Internet access.
After the e-mail standard is developed, the Bureau will implement it and provide support statewide.	Deploy enterprise e-mail technology.
Upgrade state backbone facilities from T-1 to DS-3 capabilities.	DS-3 backbone expansion.

### Accomplishments

- ▲ Deployed 150 SummitNet sites statewide, supporting application requirements throughout the state for multiple agency projects including: Job Service, property appraisal, and welfare offices.
- ▲ Provided executive reorganization infrastructure improvements for the following agencies: Commerce, Corrections, Environmental Quality, Family Services, Natural Resources and Conservation, Public Health and Human Services, and State Lands.
- ▲ Provided 900-service for the Department of Fish, Wildlife and Parks, the Legislative Branch, and the Department of Commerce.
- ▲ Upgraded 15 campus buildings with IBM intelligent hubs, which supports higher bandwidth requirements, improves management capabilities, and reduces maintenance costs.
- ▲ Expanded campus fiber backbone to include eight (8) new buildings.
- ▲ Provided transparent LAN Services to eight (8) Helena locations.
- ▲ Deployed Novell 4.1 on 60 servers statewide, supporting remote office applications for three departments (Revenue; Fish, Wildlife and Parks; and Labor and Industry).
- ▲ Upgraded switches to be compliant with the 10-digit, North American dialing plan.
- ▲ Negotiated long-distance rate reductions with state and inter-exchange carriers.
- ▲ Expanded video capabilities in Bozeman and Missoula.

- ▲ Established term contract for key systems.
- ▲ Expanded ACD (automatic call distribution) and menu applications, including voice mail.
- ▲ Enhanced IVR (interactive voice response) applications for the following agencies: Revenue; Public Health and Human Services; and Labor and Industry.



# Department of Administration

## Mission

The Department of Administration provides centralized services for state agencies in the following areas: accounting and financial reporting; warrant printing operations; bad-debt collection services; capitol complex building maintenance and capitol security; state bonded indebtedness administration; state treasury services; state payroll services; insurance coverage and Tort Claims Act administration; systems development, telecommunications, and data processing; personnel management and labor relations; purchasing and surplus property administration; and duplicating, mail, and messenger services. The department also administers the state Long-range Building Program, state employee group benefits program, and the various state retirement systems. In addition, the Board of Examiners, State Tax Appeal Board, State Compensation Mutual Insurance Fund, Public Employees' Retirement Board, and Teachers' Retirement Board are attached to the department for administrative purposes only.

*Note: The State Compensation Insurance Fund's Plans and Accomplishments are described later in this section.*

Administration

## Achieving Business Goals Through IT Initiatives

Business Goals	FY98-99 IT Projects
Successful implementation of MT PRIME will serve the goal of government efficiency by providing more accurate and timely financial and human resource information.	MT PRIME is the acronym for the Montana Project to Reengineer the Information Management Environment. The purpose of the three-phase project is to update, integrate, and enhance the state's "legacy" systems — SBAS, P/P/P, PAMS and the procurement system. Phase I, which will be completed prior to the 1997 session, will identify the strategic direction for this project as well as costs and time lines. A business case for continuing with the project will compare options with the status quo. Phases II and III, dependent on legislative approval, will design and implement the necessary systems.

## Business Goals

## FY98-99 IT Projects

The accurate and efficient storage and timely retrieval of business documents that pertain to members of the *Montana Teachers' Retirement System (TRS)*.

Automation of operations.

Imaging Work Flow implementation for *Teachers' Retirement System*.

Automation. Use current and new technologies to computerize the operations in the *State Treasurer's Office*, including bank account reconciliation; manual calculations; and handwritten deposits, transfers, and reports.

Internet/Intranet development. The department will take advantage of this emerging technology to deliver services. Initially, the focus will be on providing new ways to access existing information, including MOM, policy, personnel, benefits, training, handbooks, newsletters, bids, proposals, and contracts. The second stage will be to implement advanced services. *Personnel* will provide intelligent on-line forms, including the annual employee benefit add/change requests. *Central Stores* will provide a searchable electronic catalog and on-line ordering of supplies. *Purchasing* will offer the option for vendors to register, search RFP/RFQ by topic, and submit bids/proposals on-line.

Oracle database development, conversion and enhancement. *Architecture and Engineering Division* will develop a new *Oracle* database for project management. *Risk Management and Tort Defense Division* will convert and enhance tables of "claim" and "legal" data from a Lotus spreadsheet format to an Oracle-based database application. *Accounting and Management Support Division* will convert and enhance the *Debt Collection System*.

## Business Goals

## FY98-99 IT Projects

Automation of operations (continued).

Tesseract Insurance System. The *State Personnel Division* will install and implement the 1998 release of the Tesseract Software as part of the regular maintenance of the state's On-line Insurance System. The Tesseract Insurance System will be enhanced to accommodate the proposed Montana K-12 Health Risk Pool and Benefit Plan. Developments will be made to allow for participant eligibility tracking, enrollment, premium processing, and funding for all public school (K-12) employees and retirees. This project is pending legislative approval.

Payroll, Personnel, Position Control (P/P/P). The development or the acquisition of a system will begin to replace the state's P/P/P System following the recommendations of the MT PRIME project.

Administration

## FY98-99 IT Project Profiles

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

## FY00-01 Initiatives

- ▲ Continued implementation of new financial systems.

## Accomplishments

### *Department-wide:*

- ▲ Participating divisions purchased and installed a new Novell NetWare 4.1 server for the department. The *Public Employees' Retirement Division* purchased and installed a new Novell NetWare 4.1 server at their location.
- ▲ The department has replaced or upgraded most of the obsolete hardware technology and migrated all workstations to the Windows environment.
- ▲ The department implemented Internet access on 15% of the workstations. In addition, the *State*

*Personnel Division* has installed a dedicated Internet workstation, available to the entire staff.

- ▲ The Public Employees' Retirement Division, State Tax Appeal Board, and Central Mail Bureau have been connected to the State's communications backbone.

***Accounting and Management Support Division:***

- ▲ The input of information to the Information Control Core (ICC) for the Statewide Budgeting and Accounting System is now on-line. The ICC can be accessed through the Report Distribution System (RDS).
- ▲ The division updated the offset portion of the Debt Collection process and put it on the mainframe with the warrant system.

***Architecture and Engineering Division:***

- ▲ The division automated its Project Log. This database lists the project number, project name, budget amount, and project status (completed, delegated, etc.). The log is on-line and is accessible to all staff members for use as a reference tool.
- ▲ The division developed an automated records management system. All files in the vault have been categorized (short term, long term, etc.); on-line lists have been developed identifying the project's location in the vault; and this system provides a mechanism to schedule disposal of the appropriate projects/records.

***State Personnel Division:***

- ▲ The Personnel Division applications for Pay Analyses, Workforce Profile Reporting, and EEO (Employee Equal Opportunity) Utilization have all been converted to Windows-based applications. Graphical User Interfaces have been used to provide automation of data transfer from P/P/P to local databases, reporting, and data analyses.
- ▲ System enhancement and maintenance continues for the state's Insurance System to accommodate benefit changes and system requirements.
- ▲ All classification information and PDF (Position Detail Form) submission is now on-line, eliminating paper submission.



## Department of Agriculture

### Mission

The Department of Agriculture was established by the Montana Constitution (Article XII, Section 1) to protect, enhance, and develop all agriculture in Montana; to encourage and promote production and marketing for agriculture and allied industries; and to provide protection for producers and consumers through administration and enforcement of statutes established by Montana's legislature.

### Achieving Business Goals Through IT Initiatives

Business Goals	FY98-99 IT Projects	Agriculture
To allow the department to provide service to its cliental.	Continue upgrade of computer hardware to the minimum state standard for a desktop operating system.	
This application will support all departmental programs that require informational database support.	Begin the systems analysis for the rewrite of existing application code for Oracle.	
Supports all of the department's business goals.	Conversion of the desktop operating system to the state standard.	
To allow department staff to provide service to their cliental.	Replacement of all field-office computer equipment. Installation of state-standard operating system and application software.	
To allow department staff to provide service to their cliental.	Begin an evaluation process of developing an imaging system for the department.	

### FY98-99 IT Project Profiles

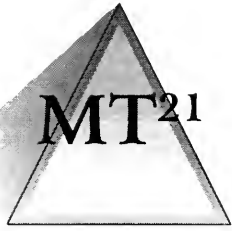
See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

## **FY00-01 Initiatives**

- ▲ Continue the conversion of x-based applications into Oracle.
- ▲ Evaluate new technologies.
- ▲ Implement imaging system.

## **Accomplishments**

- ▲ Converted all Novell LANs to Novell NetWare 4.X. Also, connected, with routers, all field offices to the Helena office.
- ▲ Upgraded computer hardware in field offices.
- ▲ Began the process of upgrading computer hardware to the minimum state standard and complying with the state database Oracle standard.



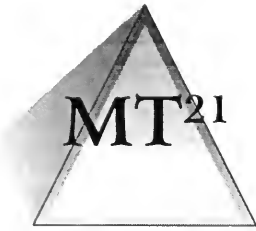
## ***Office of the State Auditor***

### **Mission**

The State Auditor acts as the Commissioner of Insurance and the Securities Commissioner. The auditor collects insurance tax premiums; and licenses insurance agents, securities salesmen, broker-dealers, and investment advisers.

### **Accomplishments**

- ▲ Continued the conversion of the current system to an Oracle platform.
- ▲ Continued the installation of an Oracle server.
- ▲ Continued upgrading computer hardware.



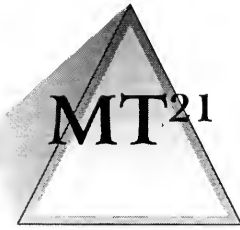
## ***Department of Commerce***

### **Mission**

The Department of Commerce encourages and promotes business activities in Montana including: providing assistance to businesses wishing to develop or expand; marketing Montana as a vacation destination and motion picture site; providing means of bringing commercial products to local, national, and international markets; providing financial and technical assistance to counties and communities; regulating financial institutions; providing building code regulations; and managing professional and occupational licensing. The Department includes the Science and Technology Alliance, Board of Investments, Board of Housing, Montana Health Facilities Authority, and Lottery Division.

### **Accomplishments**

- ▲ Connected all divisions to local area networks. New servers were installed at Professional & Occupational Licensing, Board of Housing, Building Codes, Board of Investments, and Lottery.
- ▲ Consolidated staff from eight (8) Helena locations into six (6) locations, partially due to the statewide reorganization effort. All housing agencies are now at 836 Front Street, having been moved from 2001 11th Avenue and 1424 9th Avenue. The Banking and Financial Division was moved from the Metcalf building to 836 Front and was added to the BOH server. The Weights and Measures Bureau and the Board of Horse Racing were moved from the Metcalf building, and the Montana Science and Technology Alliance was moved from downtown. Those three organizations are now located at the main Commerce building at 1424 9th Avenue, and they have been added to the main server.
- ▲ Conversion from Informix on AT&T 3B2s to Oracle on a DEC Alpha 2100 was begun. The daily accounting system in Management Services Division was converted by BDM Technologies under contract. In-house staff have payroll nearly completed, as well as a database for the Economic Development Division. At contracted services rates, the projected cost of converting the remaining Informix programs would be several times appropriated funds. Informix software will be installed on the DEC to allow the hardware conversion to take place. New development will be done in Oracle, with conversion from Informix to Oracle to be done as in-house staff time permits.



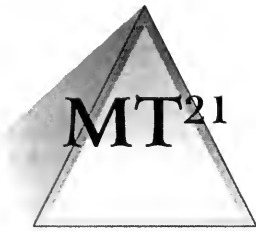
# ***Montana Consumer Counsel***

## **Mission**

The Montana Consumer Counsel (a legislative agency created by the 1972 Montana Constitution) represents the utility and transportation consuming public of the state in hearings before the Public Service Commission or any other successor agency, and before state and federal courts and administrative agencies.

## **Accomplishments**

- ▲ Finalized backbone connectivity to the mainframe.



# Department of Corrections

## Mission

The Department of Corrections is dedicated to public safety and trust by holding adult and juvenile offenders accountable for their actions through custody, supervision, treatment, work, and skill development.

## Achieving Business Goals Through IT Initiatives

Business Goals	FY98-99 IT Projects
<p>This project supports the department's goal to improve the safety of Montana's public and the security of our communities and homes. It also helps to gain public trust through openness and responsiveness, with particular recognition of crime victims and their families.</p>	<p>Adult Correctional Information System (ACIS) enhancements are planned to include the addition of a number of modules that will improve the quality and timeliness of the information the department is able to provide the legislature, other state or local entities, contractors, the public, and internal staff. Examples of the kind of data these new modules will provide are: boot camp data; victim data; treatment data; medical, dental, and mental health data; and grievance data.</p> <p>In addition, the department plans to implement digital fingerprinting and photographs. The fingerprinting system will be compatible with those in use by both the federal and state Departments of Justice. The digital photographs will be used for staff and offender identification. Also, imaging technology will be used in paperwork-intensive functions.</p> <p>Finally, there are joint agency plans to build an interface between the department's ACIS files and those of the Department of Justice's Criminal History Records System. This will allow the state to provide, through existing dispatch channels, more complete data, about an individual, to an officer in the field.</p>

Business Goals	FY98-99 IT Projects
<p>This project supports the department's goal to improve the safety of Montana's public and the security of our communities and homes. It also helps to gain public trust through openness and responsiveness, with particular recognition of crime victims and their families.</p> <p>This project supports the department's goal to improve the safety of the Montana public and the security of our communities and homes. It also helps to gain public trust through openness and responsiveness, with particular recognition of crime victims and their families.</p>	<p>The department has installed a wide-area network across the state. However, the District Probation and Parole Offices, as well as the new boot camp and the regional prisons, have not yet been connected. A campus LAN is planned for the Montana State Prison and Pine Hills School to link all of the major business activities at each location. This expansion of the network infrastructure will also support the electronic dissemination of information currently in ACIS, as well as that planned under Project 1 above.</p> <p>Montana has adopted Oracle as its database of choice, and SummitNet as its communications infrastructure. The Information Technology Advisory Council (ITAC) has endorsed certain minimum standards for desktop technology. The department plans to acquire the hardware and software needed to begin to implement those standards throughout the department.</p>

FY98-99 IT Project Profiles

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

FY00-01 Initiatives

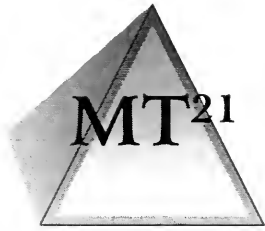
- ▲ Further deployment of imaging technology to other sites and other business functions as appropriate.
- ▲ Expansion of the installed base of micro computers on the wide-area network, as appropriate.
- ▲ Continue the migration to state standards, particularly in the area of Oracle implementation.

Accomplishments

- ▲ Implemented the legislative reorganization from an IT perspective. All automated functions have either been successfully transferred to the new Department of Public Health and Human Services or continue to be serviced by the new Department of Corrections. All network functions

coming from the old Department of Family Services have been integrated within the department's wide-area network.

- ▲ Implemented the Child and Adult Protective Services (CAPS) system in all offices with functions relating to the care of juvenile offenders. This provides Juvenile Parole Officers and staff at Montana Youth Alternatives and Pine Hills School access to automated client data and case-tracking information.
- ▲ Connected all Regional Probation and Parole offices to the state data network and the department's wide-area network. This provides the department with electronic communication to those offices. In addition, this allows for the decentralization of data-entry functions on ACIS and provides Adult Probation Officers, in the offices involved, on-line access to information about their clients.



# Department of Environmental Quality

## Mission

The Department of Environmental Quality's (DEQ) mission is to protect, sustain, and improve a clean and healthful environment to benefit present and future generations.

## Achieving Business Goals Through IT Initiatives

Business Goals	FY98-99 IT Projects
<p>The major business goal of this project is to comply with ITAC's direction. It is also to provide department users with a workstation interface and application tools to perform their jobs with a minimal amount of training as software change.</p>	<p>LAN Workstation Operating System Change. The Governor's Information Technology Advisory Council (ITAC) has adopted a resolution that the workstation operating system (now consisting of DOS and Windows 3.1x) be changed. The two operating systems being considered are Windows NT and Windows 95. This project will involve upgrading: workstation software, server software (WordPerfect, Lotus, etc.), network drivers, and hardware (new operating systems require more memory, faster computers, etc.).</p> <p>It is anticipated that this project will take three to four years, depending on the availability of funding. A request for funding for the first two years has been submitted. This is to cover costs related to changing software used by the department to be compatible with the new workstation operating system. The progress of the project will be dependent on available human resources and available funding in individual program budgets.</p>

Environmental Quality

## Business Goals

This IT Project will support DEQ's recent reorganizational changes. DEQ has recently reorganized from a discipline-oriented (Water Quality, Reclamation, Air Quality, etc.) organization to a functional organization (Permitting and Compliance, Planning, Prevention and Assistance, Enforcement, Remediation, etc.). Databases that were discipline-oriented will now need access across divisional lines; therefore, these databases will need to be DEQ enterprise-wide databases. Another major business goal will be to support the state enterprise concept which is the policy direction from ITAC and ISD.

The project will incorporate a database administrator/coordinator and Oracle Database programming training for various DEQ database programmers.

## FY98-99 IT Projects

Database Coordination. This project is to support the State of Montana's Database standard, Oracle. The DEQ's Information Services Bureau (ISB) plans to coordinate the several databases in the department and develop plans and procedures to convert these systems to Oracle. If the EPP item that is being submitted to the legislature is approved, the department will have the resources to perform functions related to database design, database naming conventions (coordinate database, table, and field definitions), and inter-related functional activities with users, contractors, developers, and DOA/ISD coordinators. This project also includes training for DEQ programmer/analysts so that they may learn and use the new database development tools.

A primary emphasis of the project will be the identification of those databases that should be converted immediately. Some of the databases that cannot be converted by department staff will be contracted to sources outside DEQ. Another part of the project will be to perform continuing coordination of database administration (DBA) activities. These include: field definition, table space, replication, security, and many others.

## Business Goals

## FY98-99 IT Projects

This project supports the major business goal of making information relative to DEQ's business available to the public through the use of the Internet.

Internet Services. This project involves providing increased Internet services in DEQ. Currently DEQ is providing Internet e-mail and Internet browsing for staff and an Internet Home Page for DEQ.

The primary focus of this project will be to provide increased web services for DEQ; thus providing increased public access to DEQ-related information. An EPP request for additional funding toward this activity has been submitted for consideration by the legislature.

The department will look to contract or obtain additional web server space for file transfers, additional pages, and other information. Currently the plan is to obtain the resources after reviewing three different approaches: 1) obtain and support a web server for the department; 2) obtain web server services and support from a private-sector source; and 3) obtain web server services and support from ISD or other state agencies.

## FY98-99 IT Project Profiles

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

## Accomplishments

- ▲ Windows Operating Platform. Beginning in July 1995, the agency began a project to convert to the Windows 3.11 operating platform. Hardware upgrades and/or replacements to file servers, workstations, and other miscellaneous equipment were necessary before implementing the Windows Platform. Software upgrades to applications and programs being used, DOS, and utilities were also necessary. This project has been a significant one, involving all of DEQ's ISB staff and many staff from the operating divisions. Many personnel in the agency obtained Windows WordPerfect and Lotus Windows training. In addition, ISB staff have provided a three-hour Windows Orientation training class to familiarize all Windows users with DEQ's Windows configuration. This project is still continuing and is targeted for completion by the third quarter of FY97.

- ▲ IT integration resulting from executive reorganization (SB 234 and SB 345). Beginning in July 1995, the DEQ ISB staff launched a project to integrate the IT platforms of the new divisions comprising the new DEQ. As a result of Senate Bill 234 and Senate Bill 345, passed in the last legislative session, various groups of personnel from three old agencies now comprise DEQ. Consequently, three different computing environments needed consolidation.

In addition, a significant number of staff were relocated to the Metcalf building, which required the wiring of that building to accommodate the state LAN wiring topology standard of Token-Ring. Involved were Department of Administration, Information Services Division, Telecommunications Operations Bureau (TOB) personnel and DEQ ISB staff. This project included the actual design (TOB), determining of telephone and data jacks (ISB), supervising the wiring crews (TOB and ISB), and many other functions.

There were three different computing platforms that had to be integrated. Two of the computing platforms (old DHES and old State Lands) were centered around Novell Network LANs. The other computing platform involved several standalone PCs and a few DEC/VAX terminals. This part of the project has been challenging and a significant achievement.

In addition, an executive reorganization is in process. This will require the equivalent of 1.00 FTE's time for a period of 24 months. The ISB staff is trying to absorb this workload. Some of the work is ongoing.

- ▲ Upgrading of Network LAN Operating system to NetWare 4.1. DEQ's ISB also initiated a project in July 1996 to upgrade the department's LAN Operating System from Novell NetWare 3.12 to 4.1. The cost of software involved with this project is minimal since the site license for Novell NetWare is included in ISD monthly workstation charges. Training for ISB staff on the new upgraded network operating system was received in June 1995. ISB began the planning, design, and testing stages in July 1996. This project is ongoing, with a completion target date of June 1997.



# Department of Fish, Wildlife and Parks

## Mission

The Department of Fish, Wildlife and Parks (FWP) conserves and manages wildlife and administers parks and recreational areas for the benefit of Montanans and visitors to the state. The department strives to create optimum outdoor recreational opportunities, with emphasis placed on wildlife and on natural and cultural resources that have aesthetic, scenic, historical, or archaeological significance. Department functions include issuing fishing, hunting, trapping, and related licenses; enforcing laws and regulations relating to fish, wildlife, and parks; acquiring, developing, and maintaining wildlife management areas, state parks, and recreational areas; and managing and enhancing wildlife populations.

## Achieving Business Goals Through IT Initiatives

Business Goals	FY98-99 IT Projects
Enhanced effectiveness of how the entire business is conducted. The integrity of the data should be very high, and the data collected should be very timely. Collection of money owed the department can be accomplished via electronic funds transfer.	Automated Licensing Statewide (Point-of-Sale). A two-year study determined that statewide online licensing was not only feasible, but held the promise of benefits to all involved parties (license buyers, license agents, FWP, and other state agencies). The project would place point-of-sale technology in all agent locations around the state. SummitNet is expected to play an integral part of the communications portion of this project. Online capture of data should allow for a high degree of integrity within the database, more timely and effective survey practices, and more effective enforcement efforts.

Business Goals	FY98-99 IT Projects
<p>Enhanced effectiveness of how agency business is conducted. The ability to quickly and easily communicate within an agency spread entirely across the state could be expected to be invaluable in providing services and consistent information to our publics.</p>	<p>Expansion of FWP networks within regional sites and area offices. Enhanced networking is expected to use SummitNet for access to state services and additional offerings such as the Internet.</p> <p>Year 2000 compliance.</p>

## FY98-99 IT Project Profiles

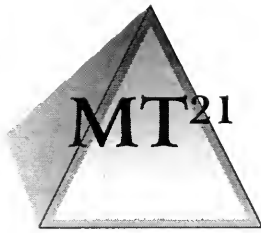
See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

## FY00-01 Initiatives

- ▲ Automated Licensing Enhancements are envisioned. This would include incorporation of the Special Drawing application process. Special Drawing applicants would be able to submit their applications online, at the time of license purchase. An obvious benefit is that the applicant will be assured of participation within the drawings. Online edits would not allow the errors that currently eliminate applications. Successful applicants could potentially receive their special permit at the agent location instead of waiting for a license to come by mail.

## Accomplishments

- ▲ Novell Network 4x upgrades are being completed for FWP headquarters and 13 other locations statewide.
- ▲ All networked locations are being migrated to Windows and Windows applications.
- ▲ An Oracle client/server database was acquired and installed. Some small systems development has occurred.



## Governor's Office

### Mission

The executive power is vested in the Governor who ensures that all state laws are faithfully executed. Offices directly attached to the Governor's Office include Citizens' Advocate, and Budget and Program Planning (OBPP).

### Achieving Business Goals Through IT Initiatives

Business Goals	FY98-99 IT Projects
The system automates many manual processes, allowing agency and OBPP staff to more efficiently and accurately complete their budgetary work. Further, it provides all parties far greater access to budgetary data.	<p>Continue first-time implementation of the Montana Integrated Budget System (MIBS). This project was begun during the current biennium, but three major portions will not be implemented until after July 1, 1997 (next biennium). Those portions are:</p> <ol style="list-style-type: none"><li>1) Management of the 1998-99 biennium budget. This is referred to as the "Comptroller Function" of the Budget Office.</li><li>2) The Executive Planning Process (EPP) for the 2000-01 biennium with on-line agency input.</li><li>3) Full implementation of the executive budget process with both Budget Office and agency input on-line and with a full range of historical data from the 1998-99 biennium to start the process.</li></ol>

## Business Goals

## FY98-99 IT Projects

The system automates many manual processes, allowing agency and OBPP staff to more efficiently and accurately complete their budgetary work. Further, it provides all parties far greater access to budgetary data.

Continue development of MIBS. It is anticipated that MIBS will need modifications to make it work better; the present design was set at a minimal level to achieve rapid implementation. With experience using this new system, OBPP will discover areas that will make budget development and implementation more effective. Also, adjustments will be needed as other state systems are modified (e.g., SBAS and P/P/P).

## FY98-99 IT Project Profiles

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

## FY00-01 Initiatives

- ▲ Continue the development, refinement, and maintenance of the 1997 biennium project, potentially including interfaces to SBAS and P/P/P as replacement systems are developed.

## Accomplishments

- ▲ Started a joint project with the Legislative Fiscal Division (LFD) to replace the Executive Budget System and related systems used by both agencies for their critical operations. The new system is called the Montana Integrated Budget System (MIBS). Progress during this biennium includes the following:
  - 1) Selection of a contractor for preliminary design and for system development.
  - 2) Forming a pact for cooperation, funding, and joint development with LFD.
  - 3) Implementation of the new MIBS system in time for use in development of the 1998-99 Executive Budget. LFD will use the system during the 1997 legislative session; then the Budget Office will use it to manage Legislative Appropriations for the entire 1998-99 biennium. Information captured during the two-year cycle will simplify preparation of the next budget (2000-01 biennium).
  - 4) Using the enterprise technology that ISD has been building for several years. The MIBS system uses an Oracle database running on a database server owned and operated

by ISD. The ISD network connects this database to the Budget Office, LFD, and centralized services personnel in all agencies.

- 5) Since this new system replaces all of the legacy systems in the Budget Office, it removes problems with the transition to Year 2000.
- ▲ Upgraded our network operating system to NetWare 4.1 and installed it on a new file server.
  - ▲ Upgraded all desktop computers to Intel 486 or Pentium processors with at least 16-MB memory and Windows 3.1.
  - ▲ During the fall of 1996, implemented the Governor's Tracking System, a database system that selectively lists individuals who have contacted the Governor by mail, fax, or telephone or through meetings. The information includes the individual's name, a brief description of the issue discussed, and the staff assigned to handle the issue. The system allows staff to avoid duplication in dealing with clients, to determine whether a response has been made, and to provide staff relevant information regarding particular contacts.
  - ▲ In use since the summer of 1994, the Executive Boards and Commissions Tracking System is a database system that streamlines the appointments to the nearly 200 boards and commissions which are created by statute or executive order. The system provides information on when appointments are due to be made, what geographical or professional requirements must be met for particular appointments, and data on current appointees.
  - ▲ To be fully implemented by January 1, 1997, the Governor's Office Legislative Tracking System is a database system that utilizes information from the Legislative Services Division's bill status system. This program allows the office to customize lists needed to track legislation by staff person or department assigned to work on particular bills.



# Montana Historical Society

## Mission

The Montana Historical Society (authorized in Section 22-3-101, MCA) acquires, conserves, advocates the protection of, provides broad access to, and interprets Montana's varied historical resources; thus promoting (for its citizens and for all others) the use, understanding, appreciation, and enjoyment of those resources. The Society maintains a library, archives, an art gallery, a museum, and historical exhibits; manages historic sites and buildings; publishes *Montana*, *The Magazine of Western History*, a newsletter, and other historical works; and provides educational information. The Society also administers the National Historic Preservation Act and the State Antiquities Act.

## Achieving Business Goals Through IT Initiatives

Business Goals	FY98-99 IT Projects
All of our projects support our major business goal of providing as much public access to the Society's collections as possible.	<p>We have requested a budget modification to update and supply a new computer for all individuals needing a computer that is capable of being more than just a word processor. This project will include networking all of these computers to give users the ability to share Oracle databases, Internet access, and other multi-tasking functions.</p> <p>Refine and expand Internet presence through a more sophisticated and interactive web site that will allow individuals to browse titles available in the library and tour our museum. This web site will be designed to provide access to most parts of the Historical Society that may not be available to students, educators, and citizens in remote parts of Montana.</p>

Business Goals	FY98-99 IT Projects
All of our projects support our major business goal of providing as much public access to the Society's collections as possible.	<p>Acquire on-line status to WLN (Western Library Network cataloging service) for the Library program. This would provide more efficient service and access, not only to the library, but to Photo Archives and Archives as well. This service is now acquired on a daily basis through the State Library.</p> <p>Implement a Collection Management System in the Museum Program. The museum collections are currently cataloged and tracked using a card system that is managed by hand. A database sufficient to track more than 40,000 objects, with the capability to search in multiple fields, is needed.</p> <p>Adopt scanning methods and CD storage for collections such as Photos. This will enable the public to review and research the entire collection more quickly and efficiently, while not harming the original artifact.</p>

**FY98-99 IT Project Profiles**

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

**FY00-01 Initiatives**

- ▲ Improve the ability of the museum program to produce exhibits by upgrading graphic capability, using exhibit design software, and providing interactive exhibit components. This project would entail purchasing a high-end computer system capable of scanning, producing, and printing high-end graphics to be displayed in the museum and the possible purchase of a CADD system to help with design needs. The interactive components may include talking computers and touch screens to view the museum collections and to learn more detailed information about the artifacts.
- ▲ Expand our Internet site to include access to the Archival database catalog, which would help researchers and citizens with genealogy questions to find more information in a more timely fashion.

- ▲ Give the public on-line access to the Preservation Office's historic and pre-historic contextual information, including national register information that provides location and significance of historical properties and cultural resource bibliographic information. This information would be combined into the GIS (geographic information system).

## **Accomplishments**

- ▲ During FY96, the Society set up short- and long-term goals to address the technology needs of the agency. One short-term goal that was accomplished included bringing the Business Office and Photo Archives program onto the state Novell Network, which has given them the ability to exchange information over the state network and over the Internet.
- ▲ Upgraded several computers to run the Windows environment and upgraded hard drives and memory on existing 486 and Pentium processors.
- ▲ Set up an Internet web site, which allows information to be distributed to citizens in Montana and the rest of the world. This web page allows Internet users to find out information ranging from the Society's hours to submitting requests for research items on the Society's vast collections of artifacts, paintings, archives, and historical books.



## ***Judicial Branch***

### **Mission**

The judicial power of the state is vested in the Supreme Court, District Courts, Justice Courts, and such other courts as may be provided by law. The Supreme Court consists of one chief justice and six associate justices elected by popular vote for an eight-year term. The Court Administrator, under direction from the Supreme Court, manages the administrative functions of the Judicial Branch.

### **Achieving Business Goals Through IT Initiatives**

Business Goals	FY98-99 IT Projects
	<p>Continued funding and support for the existing sites using the automated Montana court systems, and new funding for non-automated sites is integral to addressing growing case loads and persistently restrictive budgets. Implementation of automated standards will minimize system incompatibilities, allow for statistical and financial record keeping, and enhance judicial case management analysis.</p> <p>Continue enlarging the current user base, both in networked and standalone units. By using telecommunications products and other appropriate technologies to provide technical support, technical personnel will be able to enhance reliability.</p> <p>Construct statewide court network links for Montana courts and nationwide information systems by using statewide resources such as the State Data Network and SummitNet.</p>

## Business Goals

## FY98-99 IT Projects

Develop and enhance the Montana Judicial Case Management System (MJCMS). Work in this area will continue due to needed statutory maintenance; enhanced portions, such as restitution management module; jury selection, licensing functions, forms generation and management, calendaring, and motion tracking.

Provide a commitment to the entire court system, Supreme Court, District Court, and Courts of Limited Jurisdiction (justice of the peace and city), of high quality and more frequent training, support, upgraded equipment, and staff expertise. Consider imaging costs and benefits to the court system.

To work with other entities to establish technology links to form an integrated justice system.

## FY00-01 Initiatives

- ▲ Secure permanent funding to continue to move the Montana Court System into the next century.
- ▲ Completion of any remaining court sites not yet automated, networked, or linked to the statewide and national systems.
- ▲ Provide continuing support for the automated court information system, and provide current and appropriate technology equipment to those courts.
- ▲ Continue enhancements of the Court Case Management Systems to take advantage of current technology.
- ▲ Implement imaging for the Montana Court system.

## Accomplishments

- ▲ Continued to expand automation, and improved and supported existing sites. The Office of the Court Administrator (OAC) currently supports more than 550 users on 18 local-area networks and numerous standalone workstations at more than 81 sites. With recent system enhancements, these systems conform to the Montana Supreme Court Order mandating uniform standards for all court automation. The adopted standards ease product procurement, installation, and support of these systems. The OAC office has established closer working relationships with court clerks and judges to allow for MJCMS product migration, and has maintained excellent coordination with local elected officials in the funding and acquisition of these systems.
- ▲ Provided automation and training for courts. Except in jurisdictions where local technical expertise exists, Court Services technical personnel do the following: plan, propose, configure, ship, and install all hardware, software, and network components. Training is provided on-site and regionally (on a regular basis) in areas relating to virus protection, data management, backup/disaster recovery strategies, data security, productivity tools, and spreadsheets.

After the new site becomes familiar with the new environment, the judicial case management software developed by the Office of the Court Administrator is installed. The package consists of a court management information system that allows for fee tracking, case management, and reporting for all case types.

- ▲ Forged a partnership with Montana State University, Local Government Center, to automate the Courts of Limited Jurisdiction. The partnership allowed the OAC to automate limited courts using University expertise and University facilities for development, training, installation, and providing ongoing hotline help. With continued funding, this partnership is expected to grow and allow University expertise to assist the judicial system to move into the automated age.
- ▲ Planned and began implementation of an integrated automation system for all functions of the State Law Library. Modules include an online public access catalog, circulation, serials control, acquisitions, and cataloging. The system was chosen in cooperation with the State Library and the University System libraries; users at any site in the state will be able to search the holdings of any major library in Montana. Networking of various CD-ROM legal research products for remote use by government employees is being investigated. Members of the Law Library's staff were involved in intensive training for Internet use, and are now working with the State Bar of Montana to assist the officers of the Court with Internet access.



## *Department of Justice*

### **Mission**

The Department of Justice (headed by the Attorney General, the chief legal and law enforcement officer of the state) protects the citizens of the state through enforcement of civil and criminal laws and through programs designed to provide public safety. It provides legal services for the representation of state agencies, as well as appellate legal services and legal assistance to county prosecutors throughout the state. It conducts criminal identifications and investigations, operates the law enforcement telecommunications system, administers gambling control operations, supervises the Law Enforcement Academy, adopts and enforces fire safety codes, registers motor vehicles, issues driver's licenses, enforces motor vehicle laws, and provides technical and financial assistance to law enforcement agencies.

### **Achieving Business Goals Through IT Initiatives**

<b>Business Goals</b>	<b>FY98-99 IT Projects</b>
To improve the department's ability to capture, store, and disseminate accurate, complete, and timely criminal history records to meet changing demands of the criminal justice community.	Criminal History Records. During 1997, this program will inventory the current manual and automated processes that result in the creation, maintenance, and use of criminal history record information in various local and Montana state agencies. A reporting of findings, conclusions, and recommendations for improvements will be done. This study will serve as a foundation document for a comprehensive criminal history record information systems plan and will be used by the department, during the 1998-9 biennium, as the system requirements definition for the future development, or purchase, of a modern, automated, Criminal History Records System.

**Business Goals**

**FY98-99 IT Projects**

To provide a cost-effective computing platform and a more flexible message switcher to meet the changing technical and operational needs of state and local law enforcement agencies.

To enable the Motor Vehicle Division to present, to the 1999 legislature, a comprehensive, cost-effective proposal for an integrated, automated, motor vehicle and driver licensing system that will more efficiently serve the needs of the motoring public.

Downsize the Armory Computer and Message Switch Replacement. The Department of Justice is planning to downsize the Armory IBM 4381 computer and replace the statewide law enforcement message switching system (known as the Criminal Justice Information Network, CJIN) during the 1998-9 biennium. The overall objective is to replace the Armory mainframe computer with a smaller, more cost-effective platform for running CJIN-related databases and to replace the current message switch system with a new system that also operates on a smaller platform accessing state-standard Oracle databases using PC user workstations via a TCP/IP protocol WAN.

Feasibility Study of Motor Vehicle System. During the 1989-9 biennium the department proposes to conduct a feasibility study of computer applications that manage vehicle title and registration and driver's licensing functions. Both of these computer applications have grown from smaller, simpler systems into large, complex mainframe systems. Both programs provide statewide service and have interstate connections to other complex databases.

Both applications need to be redesigned for efficiency and ease of support and to coordinate the databases. But more importantly, these systems need to be redesigned to take advantage of potential new technologies that will allow for more cost-effective ways of providing services and information to Montanans. To accomplish a modernization of these title, registration, and driver services, the Motor Vehicle Division, in cooperation with local governments, must undertake a feasibility study to assess the current and future needs for these services and to design modern, automated processes to take advantage of new technologies and better ways of providing these services.

*Justice*

## Business Goals

## FY98-99 IT Projects

To significantly improve processes related to the regulation, inspection, and tax reporting requirements for video gambling machines.

Automated accounting and reporting system (AARP). The department is seeking a computerized accounting and reporting system to obtain play and revenue statistics from more than 18,500 video gambling machines licensed in Montana. The system requires a central computer to communicate, via modem, to each licensed video gambling machine every 24 hours to retrieve statistics and to check the integrity of the gambling device. An automated accounting and reporting system will improve the regulation, inspection, and tax reporting requirements of video gambling machines.

To prepare the Department of Justice to meet future needs for mobile (in car) access to criminal justice information by state and local law enforcement.

Mobile Data Terminal Project. In FY97, the department will conduct a pilot project that will purchase, install, and maintain (for a one-year period) a five-car, prototype, mobile data network to deliver selected CJIN information to police vehicles. This pilot will assist the department's Mobile Data Oversight Committee in producing the technical and operational specifications required for mobile access CJIN. The mobile network will consist of the mobile computer and enabling software; the hardware and software necessary for the transmission and receipt of data over the Highway Patrol's existing RF network; and the interfacing hardware and software between the mobile base station(s) and CJIN.

The technical and operational specifications developed in 1997 will have a significant impact on the department's ability to deliver CJIN information to law enforcement vehicles beginning in the 1998-9 biennium.

## FY00-01 Initiatives

- ▲ Analysis and Redesign of Motor Vehicle System. Depending on the findings and recommendations of the feasibility study in Project 4 above, a detailed analysis and redesign of the Motor Vehicle System may be undertaken beginning in 2000 or 2001. This analysis and redesign would be followed by an effort to rewrite, or otherwise replace, the current computer applications for these systems.

- ▲ NCIC 2000. The FBI has been working on a project called the "National Crime Information Center 2000." This is a comprehensive improvement program for many of the criminal justice information systems to which Montana's CJIN system has connections. Many of the improvements in the CJIN message switch, the downsizing of the Armory Computer, and other improvements to the criminal history records system are interrelated to the NCIC 2000 project. The "initial operating capacity" for NCIC 2000 is currently scheduled to occur during the second quarter of FY00.

## Accomplishments

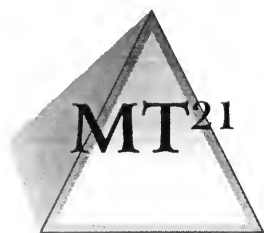
- ▲ Automation Planning. In December 1995, the Attorney General created a Department of Justice Automation Planning Committee (APC). The Attorney General established this committee to improve automation planning throughout the department and to create a comprehensive strategic planning process for automation projects. This planning effort was deemed necessary to establish automation priorities, to ensure coordination of department resources, and to improve the overall effectiveness of the various divisions in delivering public services.

The Automation Planning Committee met several times in 1996 to explore automation improvements, to coordinate automation activities, and to begin the process of developing a Department of Justice Information Technology Plan that contains short- and long-term goals, directions, and priorities. The initial plan will be in draft form by January 1997.

- ▲ Networking of Offices. The department continued the electronic linking of Helena and field offices as a top priority for the 1996-7 biennium. This was viewed as a multi-year project that would establish solid, cost-effective means of sharing information and improving the ability of employees to respond in a timely and efficient manner to work projects. The networking of PCs is also viewed as a very cost-effective means of sharing hardware and software and of improving support services for PC users.

As of July 1996, the department has local-area networks in every division, with 20 functional servers and more than 300 workstations. There remain a number of regional offices statewide that still have standalone PCs. The department is working through the Automation Planning Committee to develop a coordinated plan for networking these field offices in the future.

- ▲ Imaging pilot project. During the 1996-97 biennium, the department implemented a pilot project to explore the use of imaging technology in the Records and Driver Control Bureau of the Motor Vehicle Division. This pilot is using imaging technology to capture, store, and retrieve electronic images of paper records related to driver licensing and citation documents of Montana drivers. Montana has approximately 730,000 active driver licenses and more than 1.02 million license records. Each of these records contains multiple pieces of paper related to a single driver. This imaging pilot project, which will take several years to be fully implemented, uses the electronic copy of driver records to improve the efficiency of records management, storage, and retrieval and to improve public services related to these records.



# ***Department of Labor and Industry***

## **Mission**

The Department of Labor and Industry (DLI) provides employment and training, protects conditions of workers, and protects employer/employee rights. Its functions include: providing service to people actively seeking employment and to employers seeking workers; supervising and enforcing labor laws and worker health and safety standards; working to eliminate discriminatory practices; and administering state collective bargaining, workers' compensation, and unemployment insurance laws.

## **Achieving Business Goals Through IT Initiatives**

<b>Business Goals</b>	<b>FY98-99 IT Projects</b>
The system supports the payment of and accounting for Unemployment Insurance Benefits.	Reengineer and replace the Unemployment Insurance Benefit Accounting System.
The department purchasing process.	Continue with the on-line automated requisition purchasing system (ARPS) application using client/server technology and, as SummitNet grows, testing and implementation of the application to all DLI employees.
The department SBAS process.	Develop an on-line SBAS application using client/server technology, Oracle, and the mainframe. Communicate with DOT and DOA to reduce redundancy and to ensure data integrity. The goal is to reduce duplication of data throughout the department by sharing information but maintaining security.

Business Goals	FY98-99 IT Projects
The department case-tracking process.	Develop a client/server-based case tracking system for legal actions using contracted resources. This will automate procedures, ensure information is routed correctly, and reduce paper in a continuing effort toward the "paperless" department.
Fulfills the Governor's goal of streamlining state government for employers.	UI/DOR project. (For a description of this project, see the Department of Revenue's Information Technology plan on page 117).

**FY98-99 IT Project Profiles**

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

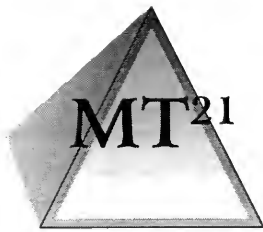
**FY00-01 Initiatives**

- ▲ Investigate the possible use of imaging and workflow technology to supplement traditional automated systems and streamline processes.
- ▲ Upgrade client/server hardware to accommodate the application growth.
- ▲ Continue with division software and hardware upgrade programs to maintain efficiency in the technology arena.

**Accomplishments**

- ▲ Installed the first regional Unemployment Insurance Telephone Claims Center. Unemployed workers in the Billings area can now start their unemployment claims by telephone. Implementation involved a new client/server document management system and enhancements to the mainframe accounting system for unemployment insurance benefits.
- ▲ Installed a department computer-training lab.
- ▲ Implemented Phase II of an electronic reporting system for employers. Employers can now file electronic quarterly reports for Unemployment Insurance Contributions as well as their employee wage records. Reports can be received on magnetic tape or diskette, or can be transmitted by telephone.

- ▲ Implemented optional Income Tax Withholding for Unemployment Insurance Claimants. Unemployment insurance benefits are taxable income, and claimants may now choose to have taxes withheld.
- ▲ The Job Service Division completed 28 kiosk installations.
- ▲ The Job Service Division has established on-line Internet access to the America Job Bank to provide nationwide recruitment as well as State of Montana employment and Job Service Office listings, MT Labor Market Information, and a self-directed Job Search.
- ▲ Phase I of ARPS has been completed and is in testing. With the state standard moving to support only Oracle Tools, this phase of the application will need to be converted. The continuation of the ARPS application will be developed using Oracle Tools.
- ▲ Out-stationed employees have the ability to connect to the LAN using the remote server that has been operational for the past 18 months.



## ***Legislative Branch***

### **Mission**

The mission of the Legislature is to exercise the legislative power of state government vested in the Legislature by the Constitution of the State of Montana. The Legislative Branch is one of three branches of state government created by the Montana Constitution. The people of Montana express their will directly through the Legislature which enacts laws, levies taxes, and appropriates revenue received from those taxes to various agencies of government for public purposes. The Montana Legislature consists of two bodies: the 100-member House of Representatives and the 50-member Senate.

The structure and function of the Legislative Branch are prescribed by constitutional law, statutes, and legislative rules. The staff entities established to support the Montana Legislature and its committees are: the Legislative Audit Division, the Legislative Services Division, the Legislative Fiscal Division, and the Montana Consumer Counsel. The legislative responsibilities include areas such as lawmaking, appropriation, taxation, oversight of the executive, and representation of local interests. The primary function of the Legislature, however, is lawmaking, which consists of the consideration of bills. Other functions of the Legislative Branch that support the Legislature's primary function include research, fiscal analysis, oversight, policy development, administration, and information distribution.

*Note: The Montana Consumer Counsel's Plans and Accomplishments are described earlier in this section.*

Achieving Business Goals Through IT Initiatives

Business Goals	FY98-99 IT Projects
<p>This project supports the business goals of enacting laws, levying taxes, and appropriating revenues. Additionally, it will enhance the legislature’s capability to provide the public with more timely and accurate information about enacted laws.</p>	<p>Legislative Automated Workflow System (LAWS). The branch has several disparate computer systems supporting branch processes, and these systems are becoming obsolete and prone to failure. LAWS will automate, integrate, and streamline session functions associated with bill and amendment drafting; bill and amendment tracking and status; bill introduction; committee support; journals; agenda preparation; enrolling and engrossing; sections affected; and indexing; as well as functions associated with the post-session publication processes of generating the Montana Code Annotated and Annotations and other post-session publications. The branch intends to purchase LAWS from a vendor through a Request for Proposal (RFP) process.</p>
<p>This project supports the administrative functions of the branch which in turn support the business goals of enacting laws, levying taxes, and appropriating revenues.</p>	<p>Convert and Consolidate Branch Administrative Systems. With the consolidation of the branch organizational structure during FY96-97, a consolidation of the branch administrative functions (accounting, payroll, inventory, purchasing, billing, training, publication distribution, etc.) occurred. In the past, branch agencies individually owned and operated their computer systems to accommodate these administrative functions. A rewrite of these systems is necessary to consolidate them into one system and also to bring them up to current state standards using Oracle database technology.</p>

FY98-99 IT Project Profiles

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

FY00-01 Initiatives

- ▲ The Branch intends to continue to investigate document management and workflow systems to

determine if these technologies can provide more efficiencies in the current branch processes.

## Accomplishments

- ▲ An extensive analysis of all of the business processes and information systems in the branch was conducted. This analysis provided the branch with the following: documentation of the processes and systems in the branch; identification of overlap in processes; identification of potential uses of new technologies, such as client/server, document management, and workflow; cost of applying new technology to the processes; and a basis for setting priorities and justifying the application of this new technology.

This analysis was used by the branch to determine development project priorities for the FY96-97 biennium and also was used to develop a computer system plan for the FY98-99 biennium. This project is also helping to ensure that all future development by the branch is integrated and that overlap in process is eliminated where possible.

- ▲ The branch, in conjunction with the Office of Budget and Program Planning, has developed a joint budgeting system using Oracle client/server technology. The system is called Montana Integrated Budget System (MIBS). MIBS replaces several legacy systems: Executive Budget System (EBS), the Legislative Budget System (LBS), The Legislative Appropriation Reporting System (LAS), and the Revenue Estimate Reporting System (RES). These antiquated systems were used by all branches of government, including the legislature. These legacy systems were not integrated and were limited in their capacity for accessing and manipulating data. The MIBS system has been defined functionally as having several distinct components, namely the budget development component, the legislative process component, and the executive turnaround/comptroller component. It will be used extensively during the entire biennial budget cycle.
- ▲ The process of analyzing SBAS data for audit purposes was enhanced by developing an Oracle client/server system. The system enables auditors to easily access SBAS transactional data and conduct a more complete analysis at the desk top. Auditors are now able to analyze SBAS data faster and in more detail.



## ***Department of Livestock***

### **Mission**

The Department of Livestock exercises general supervision over the livestock industry and protects livestock from theft and disease. Its functions are enforcement of livestock laws, including the registration of marks and brands; regulation of livestock markets; regulation of game farms; rabies control; predatory animal control; meat inspection; and regulation and control of dairy, egg, and milk inspection.

### **Achieving Business Goals Through IT Initiatives**

<b>Business Goals</b>	<b>FY98-99 IT Projects</b>
<p>This project supports the agency goal to provide system development and support within the agency and to comply with state software standards.</p>	<p>Oracle. All new database systems will be developed using the enterprise standard database software Oracle. Existing systems will be converted as they need major maintenance.</p>
<p>This project supports the agency goal to provide services, without interruption, through the turn of the century.</p>	<p>Year 2000. Implement the Year 2000 Compliance plan to ensure that systems will continue to operate as required through the turn of the century.</p>
<p>This project supports the agency goal to accurately record information, efficiently handle public inquiries, provide convenient methods, and rapidly process documents during the next rerecord of marks and brands in 2001.</p>	<p>Rerecord Preparation. Prepare for the next rerecord of marks and brands which will occur in 2001. New technologies, such as bar-coding, electronic commerce, and Internet web sites, will be studied to determine if they would be appropriate, provide cost savings, and increase efficiencies for the rerecord process. Some preliminary implementation will occur in FY99.</p>
<p>This project supports the agency goal to have information centralized for administrative purposes and accessible to employees, regardless of their location.</p>	<p>Remote Users. Install necessary hardware and software to allow employees secure access to local-area networks from remote sites. Prepare a plan to include mobile user access during the next biennium.</p>

Business Goals

FY98-99 IT Projects

This project supports the agency goal to use state standard software.

Desktop Upgrade. Upgrade desktop operating systems and software to FY99 state standards.

FY98-99 IT Project Profiles

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

FY00-01 Initiatives

- ▲ Rerecord. Implement plans developed in FY98-99 for the rerecord process. This project supports the department’s mandate to rerecord all marks and brands in calendar year 2001.
- ▲ Mobile Users. Implement plans developed in FY98-99. Purchase mobile computers for appropriate employees and provide secure access to the local-area networks. This project supports the department’s goal to centralize information and have it accessible to employees when they need it, regardless of their location.
- ▲ Web Server. Determine applications that should be available to the public and provide access through a web server. This project supports the department’s goal to have information available to employees and the public.

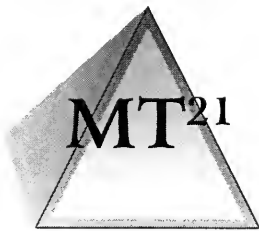
Accomplishments

- ▲ Brand Image Project. The Livestock Brands System provides for the automated capture, maintenance, and retrieval of information on all brand owners and recorded marks and brands in Montana. Part I of a two-part enhancement project was undertaken in FY90 to create and store an image of each of the more than 27,000 unique brands and to print these brand images on various documents using the Department of Administration’s laser printer. Part II of the project, to display the brand images when ownership information is retrieved on-line, was completed in FY96.

Brand inspections are required for cattle, horses, and sheep, before livestock leave Montana, cross county lines, change ownership, or are slaughtered. The latest system enhancements allow personnel to visually compare a brand on an animal to a picture of the brand, on a document or on the computer screen, to confirm ownership. This project has improved the efficiency and accuracy of ownership verification.

The Brands System is available for on-line access at 15 markets statewide and for employees located in Helena. The system tracks brands as they are issued, transferred, and rerecorded. The system also maintains mortgage information on recordings.

- ▲ Shipper/Owner/Buyer System. Livestock determined the requirements, designed, wrote, and installed the Shipper/Owner/Buyer System in each livestock market across the state. Each market maintains their own Shipper/Owner and held-proceeds information from market tallies, and buyer information from market clearance forms for cattle, horses, and sheep. Information entered at each livestock market is sent, via electronic mail, to the Helena Office where it is merged with all of the other markets' information and becomes available for on-line retrieval. This system replaced the hand-written Shipper/Owner, Buyer, and Held Proceeds books maintained by the markets. It provides consolidated access to track animals and the ownership of animals bought and sold at livestock markets on a statewide basis.
- ▲ Hardware/Software Upgrades. In FY96, the Department of Livestock completed an upgrade of all computers on local-area networks and in market offices across the state. Employees are now using state standard software and participating in enterprise applications such as electronic mail and Internet access. The department has realized efficiencies in supporting the same software applications across the divisions.



# Department of Military Affairs

## Mission

The Department of Military Affairs provides a trained and equipped military organization, via the National Guard, in the event of a state emergency; plans for, responds to, and recovers from any disaster (manmade or natural); and provides assistance to all veterans, their dependents, and beneficiaries who may be entitled to veterans’ benefits.

## Achieving Business Goals Through IT Initiatives

Business Goals	FY98-99 IT Projects
	<p>Tie the state LAN to the federal LAN.</p> <p>EIS/GIS (Emergency/Geographic Information System) capability for the state emergency operation center. Includes software and databases to support disaster risk management, response, and recovery.</p>

Military Affairs

## FY98-99 IT Project Profiles

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

## Accomplishments

- ▲ Expanded the initial LAN, consisting of five users, to incorporate two divisions: Veteran Affairs and Disaster & Emergency Services. Users now total more than 20 FTEs.



# ***Department of Natural Resources and Conservation***

## **Mission**

The Department of Natural Resources and Conservation (DNRC) helps ensure that Montana's land and water resources provide benefits for present and future generations.

## **Achieving Business Goals Through IT Initiatives**

### **Business Goals**

Our goal is to provide better public service and to cut costs. With a single computer system, the IT Bureau can focus its talents on one system instead of two. The IT staff can then provide better, more efficient computing tools to our users. By making DNRC users more efficient, they can do their jobs better and provide public services more efficiently. Costs are also reduced by eliminating redundant service and maintenance contracts on dual systems.

Our goal is to provide public access to vast amounts of agency data in the State Trust Lands and Water Rights systems. DNRC and state government will also benefit from this project. If the public can access Trust Lands and Water Rights data on-line, DNRC personnel will have fewer phone inquiries; this frees staff to perform other functions to further enhance our service to the public.

### **FY98-99 IT Projects**

Migrate from dual, multi-user, computer systems in the Helena DNRC offices to a single, multi-user system. In 1996, executive reorganization brought together the old DNRC and the Department of State Lands. State Lands used a Novell NetWare system and DNRC used a DEC VAX system. Our goal is to migrate away from the VAX system to the Novell system. This project involves rewriting in-house software on the VAX to run on a Novell platform.

Reengineer IDMS mainframe applications to Oracle. DNRC has two, large, mainframe applications in the Trust Lands Management system and the Water Rights system. We plan to migrate these systems to an Oracle database to take advantage of SQL ad hoc querying capabilities and to be able to offer inquiry access to the public through SummitNet and the Internet.

Business Goals	FY98-99 IT Projects
Our goal with the Hazard Reduction System is to better serve the public by streamlining our business function. The project directly affects how well our field offices can react to public needs in the area of timber-harvest management. By enhancing our ability to serve timber harvesters, the state benefits through better forest practices and a cleaner, safer environment.	Distributed data processing using SummitNet. As SummitNet deploys, we plan to offer distributed data processing to our field offices with our Hazard Reduction Agreement system. This system is currently administered by the Service Forestry Bureau in Missoula. Data is gathered in field offices and sent on diskette to Missoula. With SummitNet, we hope to provide on-line update and inquiry to the field offices.

FY98-99 IT Project Profiles

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

Accomplishments

- ▲ In 1996, DNRC merged with the Department of State Lands under executive reorganization. The Information and Technology Bureau of the new DNRC faced the daunting task of bringing together two drastically different computer systems in the Helena offices. State Lands used a Novell NetWare multi-user system and the old DNRC used a Digital Equipment VAX system. With ISD assistance, the IT staff succeeded in installing both of these systems running on the same wire and offering all prior services to our users. We are currently in the process of migrating to a single platform system.
- ▲ Since reorganization, DNRC has co-located four of its field offices. State Lands and old DNRC field offices in Bozeman, Glasgow, Havre, and Lewistown have been co-located into single offices. The IT Bureau's challenge was to merge office computer operations efficiently. This was accomplished satisfactorily through hardware sharing, office personnel cooperation, and IT Bureau and ISD coordination. The net result has been cost savings in the offices and improved service to the public.



## ***Office of Public Instruction***

### **Mission**

The Office of Public Instruction, OPI, (headed by the elected Superintendent of Public Instruction) provides general supervision of the public elementary and secondary schools. The superintendent also disburses state and federal education funds; accredits public schools; certifies teachers; supervises pupil transportation, school foods, and adult education programs; administers federal and special education programs; and administers K-12 technology programs. The superintendent provides technical assistance to teachers and school personnel in such areas as technology instruction and integration, basic skills, vocational skills, school finance, in-service education, planning, development, and evaluation.

### **Achieving Business Goals Through IT Initiatives**

<b>Business Goals</b>	<b>FY98-99 IT Projects</b>
<p>We will be providing a quicker turnaround time and better results on program changes to end-users as well as saving significant state and local district dollars. Additionally this project will aid in the reduction of paper and information exchanged between districts and OPI.</p> <p>Currently the system has been written to accommodate four different accountants; as such, the application has been difficult to maintain with so many code variations. The intent of this project is to make the code more generic and data driven so that changes to formulas are made by accounting, rather than programming, staff. This will provide a cost savings to the indirect cost pool. This system will also provide a method to reduce the amount of information required from a district as well as the amount of paperwork filed by the district and OPI.</p>	<p>Assume the responsibility of maintaining and enhancing the MAEFAIRS system.</p> <p>Rewrite of federal accounting system.</p>

Business Goals	FY98-99 IT Projects
<p>The major goal of this project is to cut data input, resulting in cost savings. More accurate information reported to districts will be another positive aspect of this project.</p> <p>This IT project will provide Montana's K-12 schools with assistance in an area identified by Montana's School Superintendents as a much needed resource. The project would fall under OPI's requirements to assist Montana's K-12 schools.</p>	<p>Redesign of Codebook and implementation of programming standards and reusable code.</p> <p>Technology Assistance Program for Montana Schools. As part of the School Improvement program submitted to the 1997 legislature, OPI has requested funds to provide Montana's K-12 schools with technology planning assistance as well as assistance in the integration of technology into K-12 curriculum.</p>

FY98-99 IT Project Profiles

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

Accomplishments

- ▲ The Montana Automated Education Financial and Information Reporting System (MAEFAIRS) has been implemented and is being used to report by all but fewer than 50 state school districts. This system provides Montana school districts the ability to electronically submit school-district enrollment counts, budgets, and expenditure reports to OPI. We expect to have 300 districts on-line at the end of 1997. At the end of 1996, nearly 450 districts were filing electronically.
- ▲ OPI has developed a system for coordinating enrollment and services data for migrant youth enrolled in Montana programs. The program interfaces with a system used by the Texas Education Agency to transmit migrant-youth data via the Internet. The Internet furnishes Migrant Program administrators with a universal tracking system that can provide education and service data on migrating populations in any location nationwide. As seasonal farm laborers work their way along the migrant stream, service agencies can access records and related educational data to determine the best levels of service.
- ▲ The Montana Educational Telecommunications Network (METNET) has experienced growth in users and access points. Six toll-free lines have been added supporting Migrant programs, The Governor's Blue Ribbon Telecommunications Task Force, and a Montana State University project to provide K-12 School Superintendent training. In addition, METNET has expanded to 14 remote gateway nodes to provide METNET services to Montana Communities.



# ***Department of Public Health and Human Services***

## **Mission**

The mission of the Montana Department of Public Health and Human Services (DPHHS) is to improve, preserve, strengthen, and protect the health, well-being, and self-reliance of all Montanans.

## **Achieving Business Goals Through IT Initiatives**

<b>Business Goals</b>	<b>FY98-99 IT Projects</b>
Improved record retention and paperwork management.	<p>Imaging. With the reorganization of Montana State government, DPHHS became the largest single department in the state. With this, the quantity of records, correspondence, and documents, as well as the complexity of the system required to manage them, increased proportionally. The decision was made to begin the design of an Electronic Records Management and Imaging System, to use state-of-the-art technology in redefining how we store records and manage paperwork. This effort is now just in the requirements analysis and technological research phase.</p> <p>The basic plan includes the development of a two-component system. The first component will be an archival system with which we can scan all records, presently stored or to be stored for extended periods, onto appropriate electronic media such as optical discs or microfilm. This will eliminate the need for storage space rental and additional office file cabinets and space. Electronic retrieval and distribution of records will also save time and improve efficiency.</p>

**Business Goals**

**FY98-99 IT Projects**

The second component will be an active on-line system in which all forms of records, documents, and correspondence can be scanned and placed on-line for electronic, instead of manual, distribution and processing. This will save time and reduce paperwork. An initial system design is expected to be completed by July 1, 1997. Implementation will occur depending upon the availability of funding to develop the system.

Electronic Benefits Transfer (EBT) Implementation. The department plans to implement an EBT process that will utilize smart-card technology to deliver Food Stamp and WIC (Women, Infants, and Children) benefits. The goals are to streamline the benefit issuance and redemption procedures, improve security, and eliminate the costs of producing and handling paper documents.

Virtual Department. The department plans to implement, through the use of Inter/Intranet-enabled applications, a virtual department web site that will improve access to services and reduce the time required to determine eligibility. Phase 1 will include a pilot project allowing the following capabilities: 1) complete the welfare application in an online mode; 2) access child-support account information online; 3) file an application for a birth certificate online; and 4) access the home pages of DPHHS, the Department of Labor and Industry, and the University System.

Streamline benefit issuance and redemption procedures, enhance security, and reduce paperwork.

Easier access to DPHHS services and information.

**FY98-99 IT Project Profiles**

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

## Accomplishments

- ▲ The DPHHS Supplemental Food Program for Women, Infants and Children replaced and updated its benefits delivery system in 1994. Software based upon the general design concepts of the Illinois WIC system, as modified for the Montana WIC Program, was installed. The system uses decentralized, distributed, microcomputer-based functionality and communicates to the central PC host via unattended dial-up overnight.

Implementation occurred in phases. During the initial phase beginning in May 1994, 10 local WIC agencies were converted (three of which were pilot sites), along with the central office, using the donor software. The second phase included the introduction into the system of approximately two additional local agencies per month until all 10 local agencies were functionally included by August 1994. Finally, statewide roll-out occurred through the remainder of 1994, with the last agency on-board in January 1995. There are currently 102 WIC service delivery sites statewide, including 13 local-area networks, 26 standalone sites, and 62 sites using portable laptops. Future plans include the expansion of local-area networks, including the use of wireless networks, as funds allow.

Participant characteristics and certification data are key entered into the system at the clinic level. The system captures essential food issuance data from key-entered participant IDs, food prescriptions, and food instrument serial numbers. Data captured at the clinic level is aggregated at the local agency level for program management and reporting to the state agency. All routine inter-site data communications use dial-up, asynchronous modem facilities on a store and forward basis. Automatic data calls will be made on a 24-hour cycle. All calls originate from the state WIC office. Telecommunication facilities employed allow remote dial-up and operation of clinic and administrative systems and networks, enabling state agency technical personnel to perform routine maintenance and troubleshooting without an onsite visit.

The WIC program is authorized and funded under PL 95-627, Child Nutrition Act, as amended and administered by the Family & Community Health Bureau, Health Policy & Services Division, through ARM 16.26.101-402. Sub-grants are made to local programs which provide direct services to participants. DPHHS contracts with 35 local agencies in 56 counties and seven (7) Indian reservations. WIC helps low-income women (pregnant, breastfeeding, and those who recently had a baby) and infants and children (up to age five) who are at health risk. WIC benefits include: nutrition evaluation; education and guidance to improve eating behaviors; supplemental, highly nutritious foods such as iron-fortified cereal, milk, eggs, peanut butter, dried beans, juice, and for the mother who chooses not to breast-feed, iron-fortified infant formula; and access to health care programs plus referral to private and public health care providers. To qualify for WIC benefits, a person must be pregnant, or a breastfeeding woman; a woman who recently had a baby; an infant, newly born to 12 months of age; or a child, one to five years of age who has been determined, by a health professional, to be at medical or nutritional risk and who is below 185% of Federal Poverty Income Guidelines.

- ▲ CAPS Implementation. DPHHS began statewide implementation of the Child and Adult

Protective Services System (CAPS) in March 1996. CAPS is an integrated social services system that includes child and adult protective services, services to the aged, and juvenile corrections. The system will provide a statewide, automated tool to capture and manage the critical daily decisions made by social workers and managers at the local, regional, and state office levels. The approximate cost of the system is \$3.81 million.

- ▲ Implementation of Client Server Technology. DPHHS has successfully implemented a platform (IBM Server 720 with Windows/NT and IBM RS6000 with AIX) for the department. Several projects are currently in progress that will use the client/server technology, including the Agency-Wide Accounting and Client System (AWACS) that is replacing an existing mainframe IDMS system. With the migration of the processing from the mainframe to our internal client/server environment, we will save more than \$80,000 annually in operation charges. In addition, the staff maintenance hours saved by using newer technology (Oracle 7.0, Powerbuilder, and Oracle Case Tools) will allow the department to recognize time and budget savings. Many of the current client/server projects underway, or being planned, will also take advantage of the wide-area networking facilities now available through the SummitNet project.
- ▲ Medicaid Management Information System (MMIS). MMIS is the computerized system with which all Medicaid claims in Montana are processed, data are accumulated for management analysis and reporting requirements, and payments are made to Medicaid providers. The existing system was first developed in 1987 and has undergone numerous changes over the years to keep it current with changing Medicaid and program requirements. However, only so many changes can be made to a system before it can no longer be kept up-to-date. As the contract for a Fiscal Manager to operate the MMIS was to expire on June 30, 1996, the decision was made to design and develop a new system in conjunction with letting a new contract for a Fiscal Manager. The process to accomplish this was begun in early 1995, with the RFP being issued in October 1995. The new contract for system development and operation was awarded to Consultec Inc. The new system design is similar to the previous system in that it is a legacy-type system on a mainframe with PC interface and has the same basic components or sub-systems as the old system. However, the new system incorporates many capabilities that were not possible with the old system, plus it has a Graphical User Interface that makes the system much more user friendly. Implementation of the new system is scheduled for July 1, 1997. The contract for fiscal management operation of the new system is for five years, with provisions to extend for an additional four years. The new system should improve the efficiency and effectiveness of the fiscal manager staff and the Medicaid program personnel in DPHHS.



# Department of Public Service Regulation

## Mission

The Department of Public Service Regulation (the administrative arm of the Public Service Commission, a five-member, elected commission) regulates the public utilities and transportation industries. It is responsible for providing safe, reliable, and adequate services at the lowest achievable cost to the consumers, while concurrently providing the regulated industries with a fair and reasonable return on their investment for the services rendered.

## Achieving Business Goals Through IT Initiatives

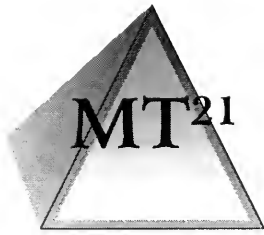
Business Goals	FY98-99 IT Projects
To provide simpler and faster public access to information and a more economical means of disseminating information.	Expand telecommunications capabilities to improve public access to information. These capabilities may include the use of the Internet/Intranet systems.

## FY98-99 IT Project Profiles

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

## Accomplishments

- ▲ Moved from a minicomputer-based system to a Novell network/PC-based operating environment.
- ▲ All users are working in a Windows environment.
- ▲ Established full Internet connectivity for all users.



## Department of Revenue

### Mission

The Department of Revenue works to encourage voluntary compliance with the laws it administers by providing professional services to the public through a supportive work environment. The department administers approximately 31 state taxes and fees, including individual income, oil and coal severance, corporation, payroll, and property taxes. The department also operates the state liquor store system and conducts investigations on alcohol and tobacco fraud activities.

### Achieving Business Goals Through IT Initiatives

Business Goals	FY98-99 IT Projects	Revenue
This system will support the integration of real property and personal property.	Property Tax. This project is a modernization of the Property Tax System. An RFI for this project has been submitted and the results returned. The next phase will be to distribute an RFP, based on information obtained from the RFI, to acquire the necessary services.	
Fulfills the Governor's goal of streamlining state government for employers.	UI/DOR Project. The Department of Revenue and the Department of Labor and Industry have created a partnership where employer-related functions will be consolidated and streamlined within the two agencies, reducing the compliance burden on employers and resulting in savings of time and money. The first project phase, which has been completed, provides simplified employer registration, standardized tax-collection laws and procedures, and a new joint-audit process; and creates a central unit for handling employer/employee dispute resolution. The next project phase has a target date of January 1, 1998 in which to complete the consolidation of tasks.	

## Business Goals

## FY98-99 IT Projects

Provide customer service and process efficiency.

Centralized Revenue Processing and Information Center. Planning and implementation of an information processing center for revenue collection services.

Improve customer service and processing efficiency within the Department of Revenue.

Telefile Project. Provides an additional channel to receive data into Revenue's information processing systems by using the telephone. Data types include, but are not limited to, tax returns and payments.

To provide Montana taxpayers services that are timely, efficient, accurate, and responsive.

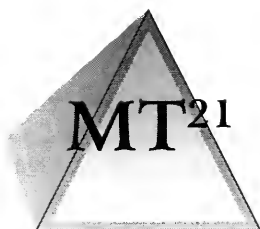
Income Tax Redesign. Revenue's major information systems will be redesigned. Technologies such as imaging, workflow processes, and electronic commerce will be incorporated to meet future business needs.

## FY98-99 IT Project Profiles

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

## Accomplishments

- ▲ Implemented electronic data interchange/electronic funds transfer (EDI/EFT) for Withholding/Old Fund Liability Taxes (WH/OFLT). This EDI/EFT project, which was initiated in FY95, was expanded to comply with proposed legislation mandating electronic filing and payment remittance for all employers reporting withholding in excess of a designated annual threshold.
- ▲ An imaging/optical character recognition (OCR) system was installed that scans withholding coupons and estimated tax coupons from both individual income tax and corporation tax. The tax processing systems within the department were enhanced to effectively interface with the OCR system. Redesign of other tax forms is in process to enhance the use of this technology and to make them more user friendly for the public.
- ▲ Modified the WH/OFLT system to align the Montana employer reporting periods with the federal schedule. This required more frequent payment remittances and only one annual filing for reconciliation purposes. This made filing easier for the taxpayers and accelerated the timing of taxes collected by the state.



# Secretary of State

## Mission

As chief election officer of the state, the Secretary of State is responsible for the application, operation, and interpretation of election laws, except those pertaining to campaign finance. The Office of the Secretary of State also: 1) files, maintains, stores, and distributes corporate documents, commercial lien information under the Uniform Commercial Code, agricultural lien information under the Federal Foods Security Act , official records of the executive branch, and acts of the legislature; 2) compiles, updates, and publishes the Administrative Rules of Montana (ARM) and the Montana Administrative Register (MAR); and 3) administers the state agency records management function, including operation of a central microfilm unit and the state records center. In addition, the Secretary of State serves on the State Land Board, Board of Examiners, and Board of Canvassers.

## Achieving Business Goals Through IT Initiatives

Business Goals	FY98-99 IT Projects
To provide quality customer service to the public, other government entities, and the office.	<p>Integrate existing and new election data and information services into a Voter Information Services Assistance Program component of the client/server Office Public/Private Enterprise Network (OPPEN) system. Includes consideration of adding geographic information systems (GIS) capabilities and using the Internet and other technologies to provide expanded public access to data and services.</p> <p>Complete the development of the accounts receivable and payment tracking functions of the client/server OPPEN system to incorporate additional management services and audit requirements.</p> <p>Reengineer the current hardcopy-based process for submitting, reviewing, updating, and publishing MAR and ARM. The office expects the foundation of the new process to be a text database, and imaging capabilities may be included.</p>

Complete the requirements analysis for the Corporations component of the client/server OPPEN system. Either begin systems development of the OPPEN/Corporations subsystem or modify the existing mainframe Corporations system to meet Year 2000 compliance. The new subsystem will provide electronic access for the public and customers.

## FY98-99 IT Project Profiles

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

## FY00-01 Initiatives

- ▲ Continue systems development of subsystem components of the OPPEN system not completed in the previous biennium.
- ▲ Enhance the OPPEN system to incorporate imaging, electronic data interchange (EDI), and electronic commerce (EC).

## Accomplishments

- ▲ Replaced outmoded file servers and workstations with current hardware. Upgraded to NetWare 4.1 and converted desktop applications to state standard, Windows-based, software packages. Establishment of a Windows for Workgroups 3.11 graphical user interface (GUI) platform running in a stable, well-performing network environment was a prerequisite for the new applications and systems (OPPEN) being planned for future bienniums.
- ▲ Initiated the OPPEN Project, which is a multi-year effort to reengineer key office business processes to increase quality customer service. Ultimately the OPPEN system will provide a common, integrated access point to all of the office's information. An initial pilot subsystem, based on Oracle's client/server technology, was developed in cooperation with the Department of Administration, ISD.
- ▲ Developed additional mainframe and PC-based programs to facilitate availability of corporate records data on electronic media and to improve corporate records and Uniform Commercial Code (UCC) reports provided for customers, the public, and state agencies. Began using the

Internet and World Wide Web (WWW) to provide increased access to elections and general office information.



## ***State Compensation Insurance Fund***

### **Mission**

The mission of the State Fund is to be Montana's insurance carrier of choice and industry leader in service. The State Fund is a nonprofit public corporation that guarantees the availability of workers' compensation coverage for all employers in Montana. It operates as any other insurer by processing claims, paying indemnity and medical benefits, and providing services to policyholders with the objective of providing superior service at a low cost, consistent with sound insurance principles.

### **Achieving Business Goals Through IT Initiatives**

The State Fund is currently involved in a major effort to retool its information technology. This will include new client/server databases, Windows-based systems, imaging technology, and workflow technology. The end result will be a nearly paperless processing environment and will bring major customer service and efficiency enhancements. More information can be found in the State Fund Strategic Business Plan.

<b>Business Goals</b>	<b>FY98-99 IT Projects</b>
Improve customer service and lower expenses.	Complete the automation of the Policy Services/Underwriting department in a client/server environment including image and workflow systems.
Customer service and communication enhancements.	Complete the automation of the medical services unit of the claims department.
Lower expenses.	Develop a State Fund presence on the Internet that includes information on reporting claims and controlling losses.
Improved resource management.	Expand electronic data interchange (EDI) to include all medical bills.
	Implement fully automated accounting specific to insurance accounting procedures.

## Accomplishments

- ▲ Installed a client/server environment utilizing a relational database and Windows user interface.
- ▲ Implemented an image and workflow system for benefit processing which is integrated with our client/server data system.
- ▲ Began an effort to design systems for our medical benefits and policy services departments.



# Montana State Library

## Mission

The Montana State Library, located at 1515 East Sixth Avenue in Helena, provides a variety of information services in three major divisions. The Statewide Library Resources section provides consulting services and assists with the improvement of library service statewide. It also provides a strong general reference collection, a depository of all state publications, and a partial depository of federal publications. Additionally, it receives six state and seven national daily newspapers.

The Natural Resource Information System (NRIS) of the Montana State Library provides a centralized access point for the many sources of information on Montana's natural resources. Online searches, data reports, and data dictionaries are available, and direct referrals are provided.

The Montana Talking Book Library is responsible for providing free library service to all Montana citizens who are blind, visually impaired, physically handicapped, or learning disabled as a result of organic dysfunction. This portion of the library is affiliated with the Library of Congress' National Library Service for the Blind and Physically Handicapped.

## Achieving Business Goals Through IT Initiatives

Business Goals	FY98-99 IT Projects
Providing better, more efficient, customer services to our patrons.	Automated system modules will be purchased for the Montana Talking Books Program, enabling this system to be integrated into the existing networked environment in this program of the State Library. This project will also translate into better customer service delivery for the print-handicapped citizens of Montana. Features such as turn around shelving, extensive reader services profiling, and other attributes will ultimately allow for maximum use of staff in this program.

Business Goals	FY98-99 IT Projects
Providing better, more efficient, customer services to our patrons.	Integration of a CD-ROM tower and associated CD products into the LAN/Novell 4.x environment in Statewide Library Resources.
Providing better, more efficient, customer services to our patrons and to the libraries that participate in this project.	Proposal of statewide licensure of electronic full-text periodical databases for Montana Libraries and public, school, academic, and agency libraries using the networked infrastructure currently being put into place.
Providing better, more efficient, customer services to our patrons.	Integration of Internet access to Statewide Library Resources' automated online catalog via the State Library Web page.

### FY98-99 IT Project Profiles

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

### FY00-01 Initiatives

- ▲ Web searching front end/engine for Statewide Library Resources' automated online catalog of resources, as well as the ability to access other "linked" statewide resources.

### Accomplishments

- ▲ Purchased, configured, and implemented the Ameritech Horizon Library Automation System, providing a public-access catalog and access to other library resources via the local-area network and across the Internet.
- ▲ Public Library Internet Infrastructure Project: Internet connectivity was established for more than 12 public libraries through a program that provided those libraries with routers, CSU/DSU (Channel/Data Service Units), the installation of 56-Kbps or better frame-relay connections, back hauls as necessary, and connections to a third-party provider of Internet services.
- ▲ Statewide Technology Committee for Montana Libraries defined a mission statement and outlined processes for devising the first library technology strategic plan for Montana Libraries. Aggregate task forces and focus groups were formed addressing technology/information

access issues facing libraries in Montana as they enter the information age of the twenty-first century.



# Department of Transportation

## Mission

The mission of the Department of Transportation (MDT) is to serve the public by establishing a transportation system that emphasizes safety, environmental preservation, cost effectiveness, and quality.

## Achieving Business Goals Through IT Initiatives

Business Goals	FY98-99 IT Projects
Provide ready access to image, spatial, and database information to support project selection, safety, maintenance, and data collection, as well as offering public access to much of this information.	Move into full production MDT's roadway imaging system, and integrate it with departmental geographic information systems (GIS) and transportation information systems (TIS).
Provide one-stop shopping for motor carrier activities such as licensing and permitting, and set direction for IV/HS (Intelligent Vehicle/Highway Systems) technology.	Network all weigh stations through SummitNet, in cooperation with Lockheed Corporation. Also, set the direction for integrating all Maintenance section houses into a wide-area network.
Increase our stakeholders' access to our electronic systems in order to streamline processing requirements, and to expand the public's access to MDT information.	Explore opportunities to utilize electronic data interchange (EDI), electronic funds transfer (EFT), telefiling, and other electronic services. Expand MDT's use of the Internet for such things as processing contractor bid-letting materials and other electronic commerce and providing access to MDT information.
Use emerging technology to increase efficiency and accuracy in our aerial mapping program.	Acquire an aerial survey control tool (ASCOT), or related product, and integrate to MDT's aerial mapping. ASCOT is a GPS-supported navigation and positioning tool that reduces the number of ground control points for mapping a project.
Provide management the necessary information to make project selection and program mix decisions.	Continue the development of the ISTEA Management Systems and their integration with TIS.

## **FY98-99 IT Project Profiles**

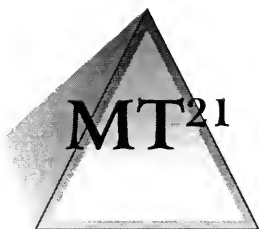
See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. The agencies and universities are listed alphabetically, with each followed by its project profiles.

## **FY00-01 Projects, Initiatives, and Goals**

- ▲ Continue pursuing the use of other emerging technologies such as multimedia/kiosks, wireless LANs, and voice/video/data integration.

## **Accomplishments**

- ▲ Upgraded all networked PCs to run Windows NT.
- ▲ Rewired and installed switched 100-MB hubs (using switched FDDI and switched Ethernet) in headquarters and the districts.
- ▲ Changed development from VAX and IBM Mainframe character-based applications to GUI-based client/server applications.
- ▲ Developed the core of a new TIS using the Oracle database management system. This new system provides capabilities such as common referencing, dynamic segmentation, and English and Metric conversions. It also provides MDT a data architecture for integrating the ISTE management systems, GIS, and roadway images.



# Montana State University

## Mission

The mission of Montana State University (MSU) is education, broadly defined to encompass teaching, research and creative activities, and outreach.

## Achieving Business Goals Through IT Initiatives

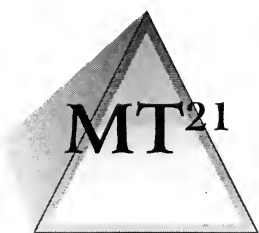
Business Goals	FY98-99 IT Projects
Streamlining information technology support of administrative offices; providing direct information access for faculty and students where appropriate.	Replace current Bozeman administrative information systems or migrate those systems to a Unix-based, client/server-based platform; seek a system that would provide a common platform for the MSU system.
Facilitate effective communication of faculty, staff, and students with each other, with colleagues at other locations within the state, and with colleagues around the world. Support outreach and extension services and distance education efforts by providing the infrastructure needed for effective interactive communication.	Implement a campus ATM network backbone and convert clients to ATM-based data network system on the basis of need for either speed of connection or need for greater functionality (e.g., voice+data+video connectivity at the desktop PC).
Support services critical to the academic mission of the University.	Replace the current library automation system with a modern system.
Use information technology to increase the effectiveness and efficiency of clients.	Provide an integrated suite of services for clients' desktop computer systems: file/print service, standardized e-mail system, calendar scheduling system, etc.
Plan for and provide an information technology environment that supports the academic mission of the University.	Work with faculty and students to develop a community understanding of the level of student access to and use of technology tools and then support the implementation of the resulting plans.

## **FY98-99 IT Project Profiles**

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

## **Accomplishments**

- ▲ Campus network cable installation on the MSU-Bozeman campus: fiber-optic backbone, CAT-5 in 10 buildings to date.
- ▲ Through the Information Services Task Force, developed a comprehensive vision of the services needed for the MSU-Bozeman campus and a structure for implementing and managing those services. That plan is now being implemented.
- ▲ At MSU-Northern, developed, in conjunction with local private-sector telephone providers, an interactive television network to serve the Highline region. The system that has been implemented is based upon modern technologies and can be extended to provide voice, video, and data service concurrently.



# *The University of Montana*

## **Mission**

The University of Montana seeks to assist the people of Montana to achieve their fullest social, cultural, intellectual, creative, vocational, professional, economic, and personal potential. It accomplishes this purpose in three primary ways. Through research and creative work, the University seeks to provide new techniques and solutions, expand the frontiers of knowledge and awareness, and prepare the people of Montana for challenges as yet unimagined. By transmitting knowledge through instructional programs and libraries, the University strives to prepare and inform future generations of professionals, leaders, and citizens in a wide range of fields, thereby providing unique opportunities for intellectual growth, social mobility, professional development, and a decent society. Through the sharing of its academic resources and faculty expertise, and by keeping the public abreast of new and critical developments, the University makes valuable contributions to the quality of life, societal well being, and the economic conditions in Montana, the nation, and the world.

The University endeavors to sustain and enhance a well-deserved reputation as one of the nation's finest liberal arts institutions with a research and graduate education mission by offering a wide array of distinctive programs which focus upon the human, natural, and social environment, culture, and conditions of Western Montana, the Rocky Mountains, Montana, the United States, and the world. Each of the four campuses of the University — located respectively in Missoula, Butte, Dillon, and Helena — have distinctive missions and associated ranges of academic and service programs to assist in the fulfillment of the University's mission. Through educational centers in numerous locations around the State and by way of distance learning technology, the University works to expand its presence through the State and eventually to make its programs accessible from anywhere in the world.

Taking its direction from the Constitution and laws of Montana and the mandates of a public institution, the University strives to serve the needs of all Montanans who meet its admission criteria. The four campuses all make unique contributions to this effort, and the resultant diverse student and client populations represent the diverse groups constituting the people of Montana. The University acts on the premise that diversity contributes to the strength of its academic and service programs.

# Achieving Business Goals Through IT Initiatives

Business Goals	FY98-99 IT Projects
	<p>Student Access. Implement seven new multimedia classrooms in FY98 (four in Missoula, two in Butte, and one in Dillon) and 12 more classrooms in FY99 (six in Missoula, two in Butte, three in Dillon, and one in Helena). Improve remote dial-up access to campus networks and Internet resources on all campuses. Increase the number of student workstations in campus labs, replace obsolete workstations with technologically current workstations, and keep workstation software current. Promote student ownership of desktop or laptop workstations through attractive pricing and financing packages. Provide on-line student access to student information systems (primarily via the web), thus permitting students to obtain services at any time, from anywhere. Additional support staff will be needed to implement and continue each of these student access initiatives.</p> <p>Information Technology Resource Centers. Support faculty in their efforts to identify new technology to support their classroom, research, and public service activities. Develop campus locations with appropriate "cutting edge" technology and support staff, where faculty can be trained in the use of new technologies. Provide "release time" or other appropriate mechanisms for faculty to experiment with new technologies and incorporate these technologies into the curriculum.</p>

The University of Montana Educational Network. Develop an educational network designed to deliver cost-effective and interactive instructional programming to learners who are place-bound or otherwise under-served in Western Montana, using current and evolving technologies such as the Internet, compressed video, KUFM-TV, and cable. Four major initiatives will be undertaken to implement the Network: 1) increase the ability of the University to transition existing and develop new mixed-media-content courses; 2) increase the ability of the University to provide traditional and electronic Library resources in support of distance learning; 3) increase the ability of the University to originate and support multiple simultaneous offerings; and 4) obtain funding to stimulate the placement, support, and operation of an appropriate telecommunications infrastructure through corporate partnership.

Support Systems. Implement the BANNER suite of software products across all campuses to significantly improve student, financial, and human resource information systems. This common software environment will provide students with complete and easy access to support services and information as they progress through their academic careers and will provide management the information needed to deliver improved educational services in an efficient and cost-effective manner. The common environment will permit mutual inter-campus technical support for implementation and operation of these large, complex, database environments. Convert other non-BANNER software to the state-standard Oracle database, with priority given to those systems sharing data with BANNER and those systems with required Year 2000 changes. Acquire new central computers on all four campuses to run the improved support systems and add systems, programming, and operations staff to implement the new systems and provide on-going support.

**Business Goals****FY98-99 IT Projects**

Network Infrastructure. Implement external fiber-optic and internal level-5 networks for the Butte, Dillon, Helena, and Missoula College of Technology campuses. This will provide immediate, high-speed access to computer-based information resources, and will become the basis for communication through voice and video in the future. Improve inter-campus connectivity; improve connectivity to K-12 schools and the Internet; and participate in national very high-speed research network initiatives. Upgrade campus network routing and computing environments to support significant increases in network traffic and add additional technical staff to support the growing network environment.

**FY98-99 IT Project Profiles**

See the table beginning on page 137 for project profiles detailing platform type, implementation schedule, emerging technologies used, new project resources and associated costs, statutory changes, and public access. Those agencies and universities that provided these details are listed alphabetically, with each followed by its project profiles.

**FY00-01 Initiatives**

- ▲ Educational Network. Expand the number of courses offered and sites served by The University of Montana Educational Network. Integrate course offerings and delivery mechanisms with other units of the Montana University System and offerings from out-of-state.
- ▲ Support Systems. Complete implementation of the BANNER software suite and conversion of non-BANNER applications to Oracle. Increase computing hardware and support resources as necessary to support additional users.
- ▲ Disaster Recovery/Backup/Security. Develop and implement a plan for disaster recovery and backup across the four campuses of the University of Montana. This effort becomes much more feasible with the implementation of the common database and support software suite. Improve security for all systems to prevent unauthorized access.

## Accomplishments

- ▲ Instructional, Research, and Public Service Initiatives. The Missoula Campus has a new support organization, the Information Technology Resource Center, providing expertise to teachers, faculty, and others on integrating technology into K-12 and Higher Education curricula, programs, and facilities. KUFM-TV, new sister station to KJSM in Bozeman, provides the first Montana Public Television in Western Montana and new public television programming statewide. Three graduate programs are offered via technology to various sites in Montana.

The Butte Campus has directed resources toward the training of faculty in the development of multi-media and distance course delivery, and students are now offered coursework via the Internet. Students on the Dillon Campus all have network accounts and can access campus information from a web server. Students at the Helena College of Technology all have access to e-mail, and the Internet is part of the curriculum.

- ▲ Support Systems. Touch-tone (telephone) registration was implemented for Missoula Campus students for the fall of 1995. The College of Technology was integrated into Student, Financial, and Human Resources information systems. Disbursement of student financial aid via electronic funds transfer (EFT) is now available, greatly reducing the time and effort needed to get student their aid monies. The BANNER Human Resources module was on-line July 1, 1996, paying Missoula Campus employees both bi-weekly and monthly. The BANNER Degree Audit and Transfer Articulation modules are installed, permitting students to better plan their coursework with faculty guidance.

The Butte Campus has installed a new DEC Alpha computer and begun implementation of Oracle and BANNER. The Student Information System has been expanded to include the College of Technology. From their offices, all faculty now access the Student Information System and both advise and register students for classes.

All administrative systems on the Dillon Campus have been migrated to a DEC Alpha computer. Oracle and BANNER Student and Financial Aid systems have been implemented. The Dillon Campus is the pilot University of Montana campus implementing BANNER Web for Student, which permits students to access their student records directly from a PC on campus or at home.

The Helena College of Technology is using the BANNER Student system, operating on the Clark computer on the Missoula Campus.

- ▲ Campus Infrastructure. The Missoula Campus network backbone is largely complete. The three routers on the campus backbone have been replaced and a fourth added, improving network performance and permitting an upgrade to ATM and other new network protocols. The Student and Human Resource Systems were migrated to a new DEC Alpha computer. The number of general-access student computer workstations has doubled, to just under 300. About 100 new or replacement faculty computer workstations have been installed. Remote student and employee dial-up access to the campus network and the Internet has been privatized, providing much

improved service levels. The data connection to the College of Technology campus has been upgraded to a dedicated T-1 line.

A fiber-optic network backbone had been completed to each building on the Butte Campus and internal level-5 wiring completed in two buildings. The data connection to the College of Technology campus has been upgraded to a dedicated 56-kbps line. More than one-third of the PCs on campus have been upgraded to Pentium processor machines, and all campus PCs have Internet access and the Microsoft suite of applications. All PC servers have been converted to Windows NT.

Two Dillon Campus buildings have been upgraded to level-5 internal wiring, and plans have been completed for rewiring all campus buildings and for migrating the campus backbone from coaxial cable to fiber. PC servers have been converted from Pathworks to Windows NT, and hardware and software in two student PC labs have been upgraded to run Windows NT Workstation.

Internal wiring is complete in the Donaldson building of the Helena Campus, with three departments now using e-mail. Student classroom and lab workstations have been upgraded to about 50% Pentium and 50% 486 processors. All administrative offices are supported by a Windows NT Server.



## ***FY98-99 IT PROJECT PROFILES***

The following project profile table provides details about various FY98-99 IT projects. The information furnished includes:

- ▲ platform type,
- ▲ implementation schedules,
- ▲ emerging technologies used,
- ▲ new project resources and associated costs,
- ▲ statutory changes, and
- ▲ public access.

Those agencies and universities able to provide such detail about their FY98-99 IT projects are listed *alphabetically* within the table, with each organization followed by its project profiles.

**Please note that information for a particular project reads horizontally across two pages.**

- ▲ The headings on all *left-hand* pages are: Project Description, Emerging Technology, and Project Type.
- ▲ The headings on all *right-hand* pages are: New Hardware, New Software, Telecommunications Impact, New FTEs, Statutory Changes, and Allows Public Access.

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

## DEPARTMENT OF ADMINISTRATION

<u><b>PROJECT 1</b></u> — MT PRIME is the acronym for the Montana Project to Reengineer the Information Management Environment. The purpose of the three-phase project is to update, integrate, and enhance the state's "legacy" systems — SBAS, Warrant Writing System, PPP, PAMS and the procurement system.								Too early to identify, but chosen solutions will likely support EDI and EBT.	<b>Application Development</b>		
									<b>Hardware</b>		
									<b>Software</b>		X
									<b>Networking</b>		
									<b>Training</b>		
									<b>Other</b>		X
<b>Platform Type</b>			<b>Implementation Schedule</b>								
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01				
Unknown											

<u>PROJECT 2</u> — Imaging Work Flow Implementation for Teachers' Retirement System.								Imaging and computer telephony integration (CTI).	Application Development	X
									Hardware	
									Software	
									Networking	
									Training	
									Other	
Platform Type			Implementation Schedule							
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01			
	X	X								

<b>PROJECT 3</b> — Automation: Use current and new technologies to computerize operations in the State Treasurer's Office, including bank account reconciliation; manual calculations; and handwritten deposits, transfers, and reports.								Possibly EDI, EBT, and imaging.	Application Development	X
									Hardware	
									Software	
									Networking	
									Training	
									Other	
Platform Type			Implementation Schedule							
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01			
	X									

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

--

Phase I (and II) will address necessary hardware.	Phase I will identify four options: do nothing; system enhancement or re-write; or buy a package.	MT PRIME has the potential for significant telecommunications impact.	Unknown	Perhaps. These will be detailed during Phases I and II.	It is likely that public access to procurement information will be improved.
---	---	---	---------	---	--

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL

High-speed scanner; Pentium workstation/21" monitor; 17" monitors for PCs; disk drive storage; CD-ROM tower.	Windows-based document imaging and retrieval software pkg./relational database for a mid-tier.	TRS bldg. is being re-wired for 16 MB or higher token-ring speed for image retrieval/storage.	None (1 FTE shared)	N/A	Public info. documents will be printed on demand; private info. will be masked.
--	--	---	---------------------	-----	---

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$35,000	\$40,000	\$3,000		\$4,400	\$82,400

Workstations (to be purchased FY97).	Oracle.	Two or three new data connections (to be implemented FY97).	None	Unknown at this time.	N/A
--------------------------------------	---------	---	------	-----------------------	-----

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
Unknown	Unknown	\$10,000	Unknown	\$500	

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

# DEPARTMENT OF AGRICULTURE

<b>PROJECT 1</b> — Continue upgrade of computer hardware to the minimum state standard for a desktop operating system.									Application Development	
									Hardware	X
									Software	X
									Networking	X
									Training	
									Other	
<b>Platform Type</b>			<b>Implementation Schedule</b>							
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01			
		X								

<b>PROJECT 2</b> — Begin the systems analysis for the rewrite of existing application code for Oracle.								All applications will be considered with enterprise implications for the department.		Application Development		X
										Hardware		
										Software		X
										Networking		X
										Training		
										Other		
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97		FY98	FY99	FY00	FY01				
	X	X										

<u>PROJECT 3</u> — Conversion of the desktop operating system to the state standard.								None	Application Development	
									Hardware	
									Software	X
									Networking	X
									Training	
									Other	
Platform Type			Implementation Schedule							
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01			
		X								

<u><b>PROJECT 4</b></u> — Replacement of all field-office computer equipment. Installation of state-standard operating system and application software.										None	Application Development	
											Hardware	X
											Software	X
											Networking	X
											Training	
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
		X										

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

--

The state standard PC is a Pentium desktop computer.	DOS 6.2; Windows 3.11; NetWare 4.X to support the state standard software.	None	None	None	N/A
--	--	------	------	------	-----

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$223,000	\$14,000				\$237,000

The system will be supported by a dedicated Oracle database server.	Oracle Developer 2000 across the NetWare 4.X, in a Windows environment.	None	1 (or through contract)	None	If so, possible access to the state intranet and the Internet will be considered.
---	---	------	-------------------------	------	---

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$40,000	\$5,100	\$80,628		\$11,000	\$136,728

The state minimum standard.	Whatever is the state standard operating system at the time.	None	None	None	N/A
-----------------------------	--	------	------	------	-----

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
	\$17,800				\$17,800

The state standard PC is a Pentium desktop computer.	DOS 6.2, Windows 3.11, and NetWare 4.X to support the state standard software.	None	None	None	N/A
--	--	------	------	------	-----

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$48,000	\$4,400			\$4,000	\$56,400

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

<u>PROJECT 5</u> — Begin an evaluation process regarding developing an imaging system for the department.										None	Application Development	
											Hardware	X
											Software	X
											Networking	X
											Training	
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
		X										

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

The state standard PC is a Pentium desktop computer.	DOS 6.2, Windows 3.11, and NetWare 4.X to support the state standard software.	None	None	None	N/A
--	--	------	------	------	-----

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

**DEPARTMENT OF CORRECTIONS**

<b>PROJECT 1</b> — ACIS enhancements are planned to include the addition of a number of modules that will improve the quality and timeliness of the information the department is able to provide the legislature, other state or local entities, contractors, the public, and internal staff.										Imaging, document mgt., digital photos/fingerprints, and bar coding.	Application Development	X
											Hardware	
											Software	
											Networking	
											Training	
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X	X										

<u><b>PROJECT 2</b></u> — Expansion of the department's wide-area network to include the District Probation and Parole Offices, the new boot camp, and the regional prisons. A campus LAN is planned for the Montana State Prison and Pine Hills School to link all of the major business activities at each location.								None	Application Development	
									Hardware	
									Software	
									Networking	X
									Training	
									Other	
Platform Type			Implementation Schedule							
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01			
		X								

<u><b>PROJECT 3</b></u> — The department plans to acquire the hardware and software needed to begin to implement state standards, including Oracle as its database, SummitNet as its communications infrastructure, and ITAC's minimum standards for desktop technology.										None	Application Development	
											Hardware	X
											Software	X
											Networking	
											Training	X
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X	X										

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

--

Optical storage for existing AS/400, optical scanning equip., bar code reading equip., and digital cameras.	Third-party software for imaging, document mgt., and digital fingerprinting; new ACIS module.	Data requirements for increased on-line communications; imaging may impact network bandwidth.	1 (Grade 16 proj. manager)	None	Will increase access to information.
---	---	---	-------------------------------	------	--------------------------------------

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$684,777	\$391,500	\$610,000	\$98,532	\$135,000	\$1,970,729 <sup>A</sup>

Desktop PCs, network file servers, shared printers.	Novell NetWare.	Connectivity for offices; may impact network bandwidth requirements.	7.5 (4.5 directly assoc.)	None	Will increase access to information.
---	-----------------	--	------------------------------	------	--------------------------------------

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$756,534	\$42,630	\$0	\$626,126	Inc. in Project 1.	\$2,018,958 <sup>B</sup>

4 developers workstations, 2 Oracle database file servers.	5 Oracle CDE 2000 developer licenses (one would be installed on an existing PC).	None	None	None	N/A
--	--	------	------	------	-----

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$76,248	\$10,000	\$0	\$0	\$12,500	\$98,748

<sup>A</sup> This total includes \$50,920 for assistance to the Pre-Release Center and Regional Prisons.

<sup>B</sup> This total includes \$376,500 for cabling costs at Montana State Prison, the Boot Camp, and Pine Hills School; \$199,152 for ISD connectivity charges; \$10,016 for telephone charges (modems); and \$8,000 for furniture.

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

## DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ)

<b>PROJECT 1</b> — LAN workstation operating system change. Windows NT and Windows 95 are being considered. This three- to four-year project (depending on funding availability) will involve upgrading workstation software, server software, network drivers, and hardware.								32-bit operating system with Unix/NetWare capabilities.	Application Development		
									Hardware		
									Software		X
									Networking		
									Training		
									Other		
Platform Type			Implementation Schedule								
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01				
		X									

<b>PROJECT 2</b> — Database coordination. The DEQ's Information Services Bureau (ISB) plans to coordinate the several databases in the department and develop plans and procedures to convert these systems to Oracle. This project also includes training for department programmer/analysts.								Client/server; Unix/NetWare, data coll., remote dial-in, optical disk storage, db replication.	Application Development	X
									Hardware	
									Software	
									Networking	
									Training	X
									Other	
Platform Type			Implementation Schedule							
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01			
	X	X								

<b>PROJECT 3</b> — Internet services. This project involves providing increased Internet services in DEQ, which is currently providing Internet e-mail and browsing for staff plus a DEQ home page.								Inter/Intranet, EDI, document management, data collection systems, etc.	Application Development	
									Hardware	
									Software	
									Networking	
									Training	
									Other	X
Platform Type			Implementation Schedule							
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01			
Unknown										

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

--

Upgrades to existing servers (disk storage arrays and increased memory); also inc. dedicated servers.	Unknown at this time.	New data requirements will be internal to DEQ and will involve increased server disk storage.	None	None	May provide enhanced capabilities toward more public access.
---	-----------------------	---	------	------	--

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$96,000	\$219,450	\$179,000	\$0	\$48,000	\$590,450 <sup>c</sup>

Using existing DEC ALPHA (Unix) server as the primary database server; Novell NetWare server for dev./testing.	Oracle database engine & dev. toolsets; DEC Unix operating system; various programs, languages, etc.	A voice and modem line plus a data jack/line for new FTE; possible increased SummitNet use.	1	None	Will increase access to information.
--	--	---	---	------	--------------------------------------

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$11,795	\$16,400	\$157,522	\$154,381	\$70,060	\$410,158

Depends on which approach is used and which outside services providers are selected.	Contemplating WWW services software.	Increased traffic on the DEQ LAN, capitol-complex backbone, and Internet network.	None	None	Will increase public access to info. and provide a means for file transfer.
--	--------------------------------------	---	------	------	---

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
		\$50,000			\$50,000

<sup>c</sup> This total includes \$48,000 for supplies and materials.

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

DEPARTMENT OF FISH, WILDLIFE AND PARKS (FWP)

<div> <div> PROJECT 1 — Automated licensing statewide (point-of-sale). This project would put point-of-sale technology in all agent locations statewide. Online capture of data should allow for a high degree of database integrity and improve survey practices and enforcement efforts. </div> </div>			<div> Point-of-sale, EFT, LAN dial-up, multimedia kiosks, and protocol gateways. </div>					Application Development	X
								Hardware	X
								Software	X
								Networking	X
								Training	X
								Other	
Platform Type			Implementation Schedule						
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01		
Unknown									

<div> <div> PROJECT 2 — Expansion of FWP networks within regional sites and area offices. Enhanced networking is expected to utilize SummitNet for access to state services and additional offerings such as the Internet. </div> </div>			<div> Full SummitNet implementation. </div>					Application Development	
								Hardware	X
								Software	X
								Networking	X
								Training	X
								Other	
Platform Type			Implementation Schedule						
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01		
		X							

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
Not finalized. Inc. central "host" site, communications transport infrastructure, and point-of-sale tech. at agents.	System design not yet completed. Oracle is expected to be used for the database engine.	Larger locations will likely use dedicated lines; remote locations will be served best by dial-up.	2 (re-directed)	Unknown at this time.	Via workstations at agent locations.
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$540,000	\$2,744,000	See "New Software"	redirect	Inc. in contract.	\$6,498,000 <sup>D</sup>
State standard micro-computers attached to the state network.	State standard software applications.	Additional network connections. Maybe centralized custom systems from regional sites.	None	None	Via FWP employees at regional/area office sites (not really public access).
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					Unknown

<sup>D</sup> This total includes the following estimates: \$1,124,000 for communication and \$2,090,000 for system support.

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

**GOVERNOR'S OFFICE**

<b>PROJECT 1</b> — Continue first-time implementation of the Montana Integrated Budget System (MIBS). This project was begun during the current biennium, but three major portions will not be implemented until after July 1, 1997 (next biennium). See this organization's IT plan for a description of those portions.												The state's first enterprise-wide Oracle application.	Application Development	X
													Hardware	
													Software	
													Networking	
													Training	
													Other	
Platform Type			Implementation Schedule											
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01							
	X	X												

<b><u>PROJECT 2</u></b> — Continue development of MIBS. We anticipate that MIBS will need modifications to make it work better; the present design was set at a minimal level to achieve rapid implementation. With experience with this new system, and as other state systems are modified, MIBS modifications will be made.								The state's first enterprise-wide Oracle application.	Application Development	X
									Hardware	
									Software	
									Networking	
									Training	
									Other	
Platform Type			Implementation Schedule							
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01			
	X	X								

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

--

The database is the first large application on ISD's new Unix mid-tier database server.	Oracle tables and forms.	N/A	None	None	Dial-up access to summary-level budgetary information.
---	--------------------------	-----	------	------	--

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$160,000		\$100,000			\$260,000

The database is the first large application on ISD's new Unix mid-tier database server.	Oracle tables and forms.	N/A	None	None	Dial-up access to summary-level budgetary information.
---	--------------------------	-----	------	------	--

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					Inc. in Project 1 costs.

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

MONTANA HISTORICAL SOCIETY

<b><u>PROJECT 1</u></b> — Update and supply new computers to staff requiring more than just a word processor. This project will include networking all of these computers to give users the ability to share Oracle databases, Internet access, and other multitasking functions.									Dial-in access to LANs, and wireless LANs.	<b>Application Development</b>		
										<b>Hardware</b>		X
										<b>Software</b>		
										<b>Networking</b>		X
										<b>Training</b>		X
										<b>Other</b>		
<b>Platform Type</b>			<b>Implementation Schedule</b>									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X	X										

<u><b>PROJECT 2</b></u> — Refine and expand Internet presence through a more sophisticated and interactive web site that will allow individuals to browse titles available in the library and tour our museum.								Application Development		X
								Hardware		
								Software		
								Networking		
								Training		
								Other		
Platform Type			Implementation Schedule							
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01			
	X	X								

<u><b>PROJECT 3</b></u> — Acquire on-line status to WLN (Western Library Network cataloging service) for the Library program. This would provide more efficient service and access not only to the library but to Photo Archives and Archives as well. This service is now acquired on a daily basis through the State Library.												
											Application Development	
											Hardware	
											Software	X
											Networking	
											Training	
									Other			
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X	X										

<b>PROJECT 4</b> — Implement a Collection Management System in the Museum Program. The Museum collections are currently cataloged and tracked using a card system that is managed manually. A database sufficient to track more than 40,000 objects, with the capability to search in multiple fields, is needed.								Document management and data collection systems.	Application Development		
									Hardware		
									Software		X
									Networking		
									Training		
									Other		
Platform Type			Implementation Schedule								
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01				
	X	X									

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
Will include larger file servers, high-end graphics PCs, drum scanners, touch screens, gateways, etc.	Most projects will involve large database applications that can migrate to an on-line platform.	Installation of voice and data jacks throughout the Society.	None	None	Internet access.
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$155,000	\$27,000	\$40,000	\$0	\$15,000	\$237 k for all 5 proj.
Will include larger file servers, high-end graphics PCs, drum scanners, touch screens, gateways, etc.	Most projects will involve large database applications that can migrate to an on-line platform.		None	None	Internet access.
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$155,000	\$27,000	\$40,000	\$0	\$15,000	\$237 k for all 5 proj.
Will include larger file servers, high-end graphics PCs, drum scanners, touch screens, gateways, etc.	Most projects will involve large database applications that can migrate to an on-line platform.		None	None	Internet access.
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$155,000	\$27,000	\$40,000	\$0	\$15,000	\$237 k for all 5 proj.
Will include larger file servers, high-end graphics PCs, drum scanners, touch screens, gateways, etc.	Most projects will involve large database applications that can migrate to an on-line platform.		None	None	Internet access.
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$155,000	\$27,000	\$40,000	\$0	\$15,000	\$237 k for all 5 proj.

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

<b>PROJECT 5</b> — Adopt scanning methods and CD storage for collections such as Photos. This will enable the public to review and research the entire collection more quickly and efficiently, while not harming the original artifact.								Imaging.	Application Development	
									Hardware	X
									Software	
									Networking	
									Training	
									Other	
Platform Type			Implementation Schedule							
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01			
	X	X								

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

Will include larger file servers, high-end graphics PCs, drum scanners, touch screens, gateways, etc.	Most projects will involve large database applications that can migrate to an on-line platform.		None	None	Internet access.
---	---	--	------	------	------------------

Estimated Project Costs (in dollars)
--------------------------------------

Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$155,000	\$27,000	\$40,000	\$0	\$15,000	\$237 k for all 5 proj.

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

**DEPARTMENT OF LABOR AND INDUSTRY (DLI)**

<b><u>PROJECT 1</u></b> — Reengineer and replace the Unemployment Insurance Benefit Accounting System.								Unknown at this time since the design has not been determined.	Application Development	X
									Hardware	
									Software	
									Networking	
									Training	
									Other	
Platform Type			Implementation Schedule							
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01			
X										

<u><b>PROJECT 2</b></u> — Continue with the ARPS application using client/server technology and, as SummitNet grows, testing and implementation of the application to all DU employees.										Client/server technology.	Application Development	X
											Hardware	
											Software	
											Networking	
											Training	
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X											

<u><b>PROJECT 3</b></u> — Develop an on-line SBAS application using client/server technology, Oracle, and the mainframe. Communicate with DOT and DOA to reduce redundancy and to ensure data integrity. The goal is to reduce duplication of data throughout the department by sharing information but maintaining security.								Client/server technology.	Application Development	X
									Hardware	
									Software	
									Networking	
									Training	
									Other	
Platform Type			Implementation Schedule							
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01			
	X									

<u><b>PROJECT 4</b></u> — Develop a client/server based case-tracking system for legal actions using contracted resources. This will automate procedures, ensure information is routed correctly, and reduce paper, thereby moving toward a paperless department.										Client/server technology.	Application Development	X
											Hardware	
											Software	
											Networking	
											Training	
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X											

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
-----------------	-----------------	-----------------------------	-------------	----------------------	--------------------------

--

N/A	N/A	N/A	None	None	None
-----	-----	-----	------	------	------

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
		\$4,000,000			\$4,000,000

N/A	N/A	N/A	None	None	None
-----	-----	-----	------	------	------

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					Unavailable

N/A	N/A	N/A	None	None	None
-----	-----	-----	------	------	------

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					Unavailable

N/A	N/A	N/A	None	None	None
-----	-----	-----	------	------	------

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					Unavailable

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

LEGISLATIVE BRANCH (except the Montana Consumer Council)

<b><u>PROJECT 1</u></b> — Legislative Automated Workflow System (LAWS). LAWS will automate, integrate, and streamline session functions associated with bill and amendment drafting; bill and amendment tracking and status; bill introduction; committee support; journals; agenda preparation; enrolling and engrossing; etc.									Document management, SGML as the document markup, client/ server, workflow.	Application Development	X
										Hardware	
										Software	
										Networking	
										Training	
										Other	
Platform Type			Implementation Schedule								
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01				
	X										

<u><b>PROJECT 2</b></u> — Convert and consolidate branch administrative systems (billing, accounting, payroll, inventory, purchasing, training, publication distribution, etc.). A rewrite of these systems is necessary to consolidate them into one system and to bring them up to current state standards using Oracle database technology.										Oracle Designer/ Developer 2000.	Application Development	X
											Hardware	
											Software	
											Networking	
											Training	
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X											

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

--

Windows NT or Unix server; plan to lease these services from ISD. Windows PCs as the client.	RFP out now. Probably an Oracle database with Powerbuilder or Oracle front end; WP text edit.	More traffic between capitol bldg./ISD. Upgrade 4-MB token ring in capitol bldg. Internet access.	None	None	System data on Internet. Few workstations in capitol bldg. for public use.
--	---	---	------	------	--

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
		\$500,000			\$640,000 <sup>E</sup>

Will use existing network and PCs in branch and lease Oracle server services from ISD.	Oracle Designer/ Developer 2000.	More traffic between capitol bldg./ISD to access leased server. Upgrade 4-MB token ring in capitol.	None	None	None
--	----------------------------------	---	------	------	------

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
		\$90,000			\$105,000 <sup>F</sup>

<sup>E</sup> This total includes \$120,000 for ISD server services and \$20,000 for Web server services.

<sup>F</sup> This total includes \$15,000 for ISD server services.

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

# DEPARTMENT OF LIVESTOCK

<u>PROJECT 1</u> — Oracle. All new database systems will be developed using the enterprise standard database software Oracle. Existing systems will be converted as they need major maintenance.										N/A	Application Development	X
											Hardware	
											Software	
											Networking	
											Training	
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
		X										

<u>PROJECT 2</u> — Year 2000. Implement the year 2000 compliance plan to ensure that systems will continue to operate as required through the turn of the century.												N/A	Application Development	X
													Hardware	
													Software	
													Networking	
													Training	
													Other	
Platform Type			Implementation Schedule											
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01							
		X												

<b>PROJECT 3</b> — Rerecord preparation. Prepare for the next rerecord of marks and brands in 2001. New technologies, such as bar coding, electronic commerce, and Internet web sites, will be studied to determine if they would be appropriate, provide cost savings, and increase efficiencies for the process.										Possibly bar coding, scanning, EC, Internet, and voice/data integration.	Application Development	X
											Hardware	X
											Software	X
											Networking	
											Training	
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
X		X										

<b>PROJECT 4</b> — Remote users. Install necessary hardware and software to allow employees secure access to local-area networks from remote sites. Prepare a plan to include mobile users in the next biennium.										Dial-in access to LANs and mobile computing.	Application Development	
											Hardware	X
											Software	X
											Networking	X
											Training	X
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
		X										

<b>New Hardware</b>	<b>New Software</b>	<b>Telecommunication Impact</b>	<b>New FTEs</b>	<b>Statutory Changes</b>	<b>Allows Public Access?</b>
---------------------	---------------------	---------------------------------	-----------------	--------------------------	------------------------------

--

An Oracle server and client are required to meet memory, hard disk space, processor, and OS specifications.	Oracle.	A new server will be attached to the network.	None	N/A	N/A
---	---------	---	------	-----	-----

<b>Estimated Project Costs (in dollars)</b>					
<b>Hardware</b>	<b>Software</b>	<b>Contracted Services</b>	<b>FTEs</b>	<b>Assoc. Training</b>	<b>TOTAL</b>
\$15,000	\$2,500			\$6,000	\$23,500

N/A	N/A	N/A	None	N/A	N/A
-----	-----	-----	------	-----	-----

<b>Estimated Project Costs (in dollars)</b>					
<b>Hardware</b>	<b>Software</b>	<b>Contracted Services</b>	<b>FTEs</b>	<b>Assoc. Training</b>	<b>TOTAL</b>

This project will identify the new system hardware required.	PC platform: Oracle interface for the accounting portion. MF system: some changes in COBOL.	Methods to link voice and data will be studied for new ways to handle the phone-call volume.	None	N/A	Public access to summary info. regarding the overall rerecord process.
--	---	--	------	-----	--

<b>Estimated Project Costs (in dollars)</b>					
<b>Hardware</b>	<b>Software</b>	<b>Contracted Services</b>	<b>FTEs</b>	<b>Assoc. Training</b>	<b>TOTAL</b>

New hardware installed on the LAN to handle incoming calls from remote users with modems on their PCs.	New LAN software will handle incoming protocols; remote users will need new PC software.	New phone lines will be installed and a new connection to the network.	None	N/A	N/A
--	--	--	------	-----	-----

<b>Estimated Project Costs (in dollars)</b>					
<b>Hardware</b>	<b>Software</b>	<b>Contracted Services</b>	<b>FTEs</b>	<b>Assoc. Training</b>	<b>TOTAL</b>
\$3,500	\$1,000				\$4,500

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

<u>PROJECT 5</u> — Desktop upgrade. Upgrade desktop operating systems and software to new state standards.								N/A	Application Development	
									Hardware	
									Software	X
									Networking	
									Training	X
									Other	
Platform Type			Implementation Schedule							
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01			
		X								

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

Requirements will depend on the state's future software standards.	The state's future software standarda will be determined by ITAC and IIMG.	N/A	None	N/A	N/A
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
	\$24,000				\$24,000

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

**DEPARTMENT OF MILITARY AFFAIRS**

<u>PROJECT 1</u> — Tie the state LAN to the federal LAN.																				Application Development		
																				Hardware		X
																				Software		X
																				Networking		X
																				Training		X
																				Other		
Platform Type			Implementation Schedule																			
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01															
		X																				

<u>PROJECT 2</u> — EIS/GIS (Emergency/Geographic Information System) capability for the state emergency operation center. Includes software and databases to support disaster risk management, response, and recovery.										Application Development		
										Hardware		X
										Software		X
										Networking		X
										Training		X
										Other		
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
		X										

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
LAN server enhancement.					
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$60,000		\$30,000		\$4,000	\$94,000
Large-screen projection system.	EIS; GIS software (ARCVIEW); database software.				
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					Inc. in Project 1 costs.

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

**DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION (DNRC)**

<b><u>PROJECT 1</u></b> — Migrate from dual multi-user computer systems in the Helena DNRC offices to a single multi-user system. In 1996, executive reorganization brought together the old DNRC and the Department of State Lands. This project involves rewriting in-house software on the VAX to run on a Novell platform.										None	Application Development	X
											Hardware	
											Software	
											Networking	X
											Training	
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X											

<b>PROJECT 2</b> — Reengineer IDMS mainframe applications to Oracle. DNRC plans to migrate the Trust Lands Management system and the Water Rights system to an Oracle database to take advantage of SQL ad hoc querying capabilities and to be able to offer inquiry access to the public through SummitNet and the Internet.								Oracle database access will be through SummitNet with links to the Internet; also dial-in capability.		Application Development		X
										Hardware		
										Software		
										Networking		
										Training		
										Other		
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X											

<b><u>PROJECT 3</u></b> — Distributed data processing using SummitNet. As SummitNet deploys, DNRC plans to offer distributed data processing to its field offices with their Hazard Reduction Agreement system. With SummitNet, DNRC hopes to provide on-line update and inquiry to those field offices.								Using SummitNet as the communications medium for distributed data processing.		Application Development		X
										Hardware		
										Software		
										Networking		X
										Training		
										Other		
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X	X										

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

--

A new Novell server will be required at the New York State DNRC offices.	Perhaps some database software for development and access of migrated software systems.	None	1 (temporary; for a year or two)	None	No
--	---	------	----------------------------------	------	----

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$28,000	\$5,000	\$0	\$68,000	\$0	\$101,000

An Oracle server. May be able to use ISD's DEC Alpha server.	Oracle database and Oracle Forms for the user interface; HTML pkg. for home-page development.	Will require statewide access to these DNRC systems for both public and agency use.	None	None	Public on-line access to agency data through SummitNet/ Internet.
--	---	---	------	------	---

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$0	\$0	\$1,000,000	\$0	\$0	\$1,000,000

SummitNet-access hardware in field offices where timber harvest management is applicable.	Oracle database for the system. Front-end software, at field offices, for data inquiry and update.	High-speed data communications between field offices and the Hazard Reduction host site.	None	None	No
---	--	--	------	------	----

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$0	\$10,000	\$100,000	\$0	\$0	\$110,000

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

## OFFICE OF PUBLIC INSTRUCTION (OPI)

<b>PROJECT 1</b> — Assume the responsibility of maintaining and enhancing the MAEFAIRS system.										EDI; electronic forms on the METNET BBS.	Application Development	X
											Hardware	
											Software	
											Networking	
											Training	
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
		X										

<u><b>PROJECT 2</b></u> — Rewrite of federal accounting system.										Electronic forms for the METNET BBS; application links with systems to reduce required reporting by OPI.	<b>Application Development</b>	X
											<b>Hardware</b>	
											<b>Software</b>	
											<b>Networking</b>	
											<b>Training</b>	
											<b>Other</b>	
<b>Platform Type</b>			<b>Implementation Schedule</b>									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
		X										

<b>PROJECT 3</b> — Redesign of Codebook and implementation of programming standards and reusable code.								This project will aid in EDI between applications.	Application Development		X
									Hardware		
									Software		
									Networking		
									Training		
									Other		
Platform Type			Implementation Schedule								
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01				
		X									

<b>PROJECT 4</b> — Technology Assistance Program for Montana schools. As part of the School Improvement Program submitted to the 1997 Legislature, OPI has requested funds to provide Montana's K-12 schools with technology planning assistance plus assistance in the integration of technology into K-12 curriculum.										Increase access to METNET and expand person-to-person video systems in K-12 schools and univ.	Application Development	
											Hardware	
											Software	
											Networking	
											Training	
											Other	X
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
		X										

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
Already existing, in place, and functional.	The software will be developed by OPI staff.	Additional lines to METNET.	1 programmer	May make MAE-FAIRS mandatory for district reporting.	MAEFAIRS info. will be put on METNET for electronic public access.
<b>Estimated Project Costs (in dollars)</b>					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
			\$189,500		\$189,500
N/A	The software will be the end result of this project.	This project should reduce the amount of data collected and disseminated.	None (Maybe a contractor)	N/A	Info. from this application will be put on METNET for elec. public access.
<b>Estimated Project Costs (in dollars)</b>					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
		\$195,000		\$25,000	\$220,000
Already existing, in place, and functional	The software will be the end result of this project.	A new dataset will be created that will bridge automatically to the old datasets.	None (db administrator maybe)	N/A	Electronic version of the school directory would be provided on METNET.
<b>Estimated Project Costs (in dollars)</b>					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
	\$10,000	\$155,000	\$149,000	\$5,000	\$319,000
All systems run on standard Pentium PCs.	N/A. Existing systems are used.	Two standard voice-grade lines for METNET expansion.	2	N/A	Public access through the METNET system.
<b>Estimated Project Costs (in dollars)</b>					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$76,000	\$14,000		\$140,000	\$20,000	\$290,000 <sup>a</sup>

<sup>a</sup> This total includes \$40,000 for operating expenses.

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

**DEPARTMENT OF PUBLIC HEALTH AND HUMAN SERVICES (DPHHS)**

<p><u><b>PROJECT 1</b></u> — EBT Implementation. DPHHS plans to implement an EBT process which will utilize smart card technology to deliver Food Stamp and WIC benefits. The goals are to streamline the benefit issuance and redemption procedures, improve security, and end the costs of producing and handling paper documents.</p>										EBT	Application Development	X
											Hardware	X
											Software	X
											Networking	X
											Training	X
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
X	X	X										

<u><b>PROJECT 2</b></u> — Virtual Department. DPHHS plans to implement, through the use of Inter/Intranet enabled applications, a virtual department web site that will improve access to services and reduce the amount of time required to determine eligibility. Phase I of the project will include a pilot project.												Inter/Intranet		Application Development		X	
														Hardware		X	
														Software		X	
														Networking		X	
														Training		X	
														Other			
Platform Type			Implementation Schedule														
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01										
X	X	X															

<u><b>PROJECT 3</b></u> — Imaging. Begin the design of an Electronic Records Management and Imaging System to utilize state-of-the-art technology in redefining how DPHHS stores records and manages paperwork.												Imaging; document management.	Application Development	X
													Hardware	X
													Software	X
													Networking	X
													Training	X
													Other	
Platform Type			Implementation Schedule											
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01							
Unknown														

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

--

N/A	N/A	N/A	N/A		
-----	-----	-----	-----	--	--

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					\$2,000,000 <sup>H</sup>

N/A	N/A	N/A	N/A		
-----	-----	-----	-----	--	--

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL

This project is in the planning stages. Hardware requirements have not been determined.	This project is in the planning stages. Software requirements have not been determined.	N/A	N/A		
---	---	-----	-----	--	--

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL

<sup>H</sup> This total represents the implementation and pilot.

Project Description	Emerging Technology	Project Type
------------------------	------------------------	-----------------

DEPARTMENT OF PUBLIC SERVICE REGULATION

<div> <div> PROJECT 1 — Expand telecommunications capabilities to improve public access to information. These capabilities may include the use of the Inter/Intranet systems. </div> </div>			Inter/Intranet					Application Development	X
								Hardware	
								Software	
								Networking	X
								Training	
Platform Type			Implementation Schedule					Other	
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01		
		X							

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

--

Not yet determined.	Not yet determined.	Impraved Internet connectivity (increased bandwidth) and more reliable connection to the Internet.	None	N/A	Public access to data now provided by direct staff contact or by mass mailings.
---------------------	---------------------	--	------	-----	---

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

**DEPARTMENT OF REVENUE (DOR)**

<u><b>PROJECT 1</b></u> — Property Tax. This project is a modernization of the Property Tax System. An RFI has been submitted, and the results have been returned. The next phase will be to distribute an RFP, based on information obtained from the RFI, to acquire the necessary services.										Pen-based (data collection) systems.	Application Development	X
											Hardware	
											Software	
											Networking	
											Training	
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X											

<u><b>PROJECT 2</b></u> — UI/ DOR Project. DOR and Department of Labor have created a partnership whereby employer-related functions will be consolidated and streamlined within the two agencies, reducing the compliance burden on employers and resulting in savings of time and money.										Oracle client/ server relational database; possibly imaging.	<b>Application Development</b>		X	
											<b>Hardware</b>		X	
											<b>Software</b>		X	
											<b>Networking</b>			
											<b>Training</b>			
											<b>Other</b>			
<b>Platform Type</b>			<b>Implementation Schedule</b>											
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01							
X	X													

<b><u>PROJECT 3</u> — Centralized Revenue Processing and Information Center. Planning and implementation of an information processing center for revenue collection services.</b>										Imaging; scanning; workflow; and client/server.	<b>Application Development</b>	X
											<b>Hardware</b>	X
											<b>Software</b>	X
											<b>Networking</b>	
											<b>Training</b>	
											<b>Other</b>	
<b>Platform Type</b>			<b>Implementation Schedule</b>									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X	X										

<b>PROJECT 4</b> — Telefile Project. Provides an additional channel to receive data into DOR's information processing systems by using the telephone. Data types include, but are not limited to, tax returns and payments.									Interactive Voice Response; Electronic Funds Transfer.		Application Development		X
											Hardware		
											Software		
											Networking		
											Training		
											Other		
Platform Type			Implementation Schedule										
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01						
		X											

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

--

Replacement of the AS400.	Project will be contracted; proposed software probably a client/server relational database.	Database may be distributed across all platforms. Pen-based data collection devices and client/server.	None	None	Inquiry for the public is provided by terminals located in county offices.
---------------------------	---	--	------	------	--

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					\$4,047,000

If mainframe is used, ISD's System A would be required. If mid-tier, probably a mid-tier server.	Oracle relational database client/server.	Possible IVR. Database may be spread across platforms. If mid-tier, SummitNet involvement.		Will harmonize UI tax laws with OFLT and Withholding tax laws.	Unknown at this time.
--	---	--	--	--	-----------------------

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					\$2,570,514

No.	No.	Yes, due to client/server.		Unknown.	Where possible.
-----	-----	----------------------------	--	----------	-----------------

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					\$7,500,000

Hardware will be provided and kept at the vendor's site.	Vendor software that will allow the use of telephones for submission of short-form tax returns.	This is an interactive voice communication with the user	None	None	Taxpayers will be filing their tax returns using the telephone.
--	---	--	------	------	---

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
		\$310,000			\$310,000

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

<b><u>PROJECT 5</u></b> — Income Tax Redesign. DOR's major information systems will be redesigned. Technologies such as imaging, workflow processes, and electronic commerce will be incorporated to meet future business needs.										EC, imaging, IVR, client/server database, scanning, and Internet.	<b>Application Development</b>	X
											<b>Hardware</b>	X
											<b>Software</b>	X
											<b>Networking</b>	
											<b>Training</b>	
											<b>Other</b>	
<b>Platform Type</b>			<b>Implementation Schedule</b>									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
X	X											

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

Mid-tier addition to mainframe.	Client/server database.	IVR for inquiry and also filing tax returns. Imaging for workflow over SummitNet.	None	None	None
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					\$9,915,000

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

**SECRETARY OF STATE**

<b><u>PROJECT 1</u></b> — Integrate existing and new election data and information services into a Voter Information Services Assistance Program component of the client/server OPPEN system. Includes consideration of adding GIS capabilities and the use of Internet, etc., to increase public access to data and services.											Internet; GIS, desktop mapping; imaging?; voice/data integration?; doc. man.; dial-in LAN access.	Application Development	X
												Hardware	?
												Software	?
												Networking	
												Training	
												Other	
Platform Type			Implementation Schedule										
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01						
	X	X											

<b>PROJECT 2</b> — Complete the development of the accounts receivable and payment-tracking functions of the client/server OPPEN system to incorporate additional management services and audit requirements.													Not known until further analysis and planning are completed.	Application Development	X
														Hardware	
														Software	
														Networking	
														Training	
														Other	
Platform Type			Implementation Schedule												
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01								
	X														

<b>PROJECT 3</b> — Reengineer the current hardcopy-based process for submitting, reviewing, updating, and publishing the Montana Administrative Register (MAR) and Administrative Rules of Montana (ARM). The foundation of the process is expected to be a text database and may include imaging capabilities.										Not known until further analysis and planning are completed.	Application Development	X
											Hardware	?
											Software	?
											Networking	
											Training	
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X	?										

<u><b>PROJECT 4</b></u> — Complete the requirements analysis for the Corporations component of the client/server OPPEN system. Either begin systems development of the OPPEN/Corporations subsystem or modify the existing mainframe Corporations system to meet year 2000 compliance.													Not known until further analysis and planning are completed.	Application Development	X
														Hardware	
														Software	
														Networking	
														Training	
														Other	
Platform Type			Implementation Schedule												
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01								
	X														

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
Not known until further analysis and planning are completed.	Not known until further analysis and planning are completed.	Not known until further analysis and planning are completed.	None	Election, voter reg., and dist. apportionment are being reviewed.	Public access may be provided through the Internet.
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					Unknown
Not known until further analysis and planning are completed.	Not known until further analysis and planning are completed.	Not known until further analysis and planning are completed.	None	Not known until further analysis and planning are completed.	Not known until further analysis and planning are completed.
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					Unknown
Not known until further analysis and planning are completed.	Not known until further analysis and planning are completed.	Not known until further analysis and planning are completed.	None	Not known until further analysis and planning are completed.	Not known until further analysis and planning are completed.
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					Unknown
Not known until further analysis and planning are completed.	Not known until further analysis and planning are completed.	Not known until further analysis and planning are completed.	None	Not known until further analysis and planning are completed.	Not known until further analysis and planning are completed.
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					Unknown
Not known until further analysis and planning are completed.	Not known until further analysis and planning are completed.	Not known until further analysis and planning are completed.	None	Not known until further analysis and planning are completed.	Not known until further analysis and planning are completed.
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					Unknown

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

MONTANA STATE LIBRARY

<b><u>PROJECT 1</u></b> — Purchase of automated system modules for Montana Talking Books Program, enabling this system to be integrated into the existing networked environment in this program of the State Library.										Potentially, patrons will be able to request materials on-line via the Internet.	Application Development		
											Hardware		
											Software		X
											Networking		
											Training		
											Other		
Platform Type			Implementation Schedule										
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01						
		X											

<b><u>PROJECT 2</u> — Integration of CD-ROM tower and integration of associated CD products into LAN/Novell 4.x environment in Statewide Library Resources.</b>										Potentially, patrons will be able to request materials on-line via the Internet.	<b>Application Development</b>		
											<b>Hardware</b>		X
											<b>Software</b>		X
											<b>Networking</b>		X
											<b>Training</b>		
											<b>Other</b>		
<b>Platform Type</b>			<b>Implementation Schedule</b>										
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01						
	X	X											

<b>PROJECT 3</b> — Proposal of Statewide Licensure of electronic full-text periodical databases for Montana Libraries, plus public, school, academic, and agency libraries, using the networked infrastructure currently being put into place.										Patrons and libraries will be able to access materials on-line via the Internet.	Application Development	
											Hardware	
											Software	
											Networking	X
											Training	
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X	X										

<b>PROJECT 4</b> — Integration of Internet access to Statewide Library Resources automated online catalog via the State Library Web page.										Patrons will be able to access the Library catalog via WWW browsers.		Application Development		
												Hardware		X
												Software		X
												Networking		X
												Training		
												Other		
Platform Type			Implementation Schedule											
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01							
	X	X												

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

--

Additional memory and disk space for current server.	Unknown at this time.	Potentially, patrons will be able to request materials on-line via the Internet.	None	None	Patrons will be able to request materials on-line via the Internet.
--	-----------------------	--	------	------	---

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL

CD-ROM server and towers.	Unknown at this time.	Potentially, patrons will be able to request materials on-line via the Internet.	None	None	Patrons will be able to request materials on-line via the Internet.
---------------------------	-----------------------	--	------	------	---

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL

None	None	Patrons and libraries will be able to access the materials on-line via the Internet.	None	None	Patrons and libraries will be able to access materials on-line via the Internet.
------	------	--	------	------	--

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL

Additional memory and disk space for Library Automation System server.	Software to maintain the public access catalog in an HTML format.	Patrons will be able to access the Library catalog via WWW browsers.	None	None	Patrons will be able to access the Library catalog via WWW browsers.
--	---	--	------	------	--

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

**DEPARTMENT OF TRANSPORTATION (MDT)**

<b>PROJECT 1</b> — Move MDT's roadway imaging system into full production and integrate it with departmental GIS and TIS systems.										Imaging — digital images integrated with GPS and field data collection.	Application Development	X
											Hardware	
											Software	
											Networking	
											Training	
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X	X										

<b>PROJECT 2</b> — Network all weigh stations through SummitNet, in cooperation with Lockheed Corp. Also, set the direction for integrating all Maintenance section houses into a wide-area network.								EDI; motor carrier weigh-in-motion; data warehousing; and additional IV/HS, such as AVC.	Application Development	X
									Hardware	X
									Software	X
									Networking	X
									Training	X
									Other	
Platform Type			Implementation Schedule							
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01			
X	X	X								

<b>PROJECT 3</b> — Explore opportunities to use electronic data interchange (EDI), electronic funds transfer (EFT), telefiling, and other electronic services. Expand MDT's use of the Internet for such things as processing contractor-bid-letting materials and other electronic commerce; providing access to MDT information; etc.										EDI; EFT; Telefiling; Internet.	Application Development	X
											Hardware	
											Software	
											Networking	
											Training	
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X	X										

<u><b>PROJECT 4</b></u> — Acquire an Aerial Survey Control Tool (ASCOT) or related product and integrate to MDT's aerial mapping. ASCOT is a GPS supported navigation and positioning tool that reduces the number of ground control points for mapping a project.										ASCOT	Application Development	X
											Hardware	
											Software	
											Networking	
											Training	
											Other	
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
		X										

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

--

Digital Alpha 2100 server; clients are Pentium PCs.	Oracle Database Oracle Developer 2000 ARCinfo Arcview 3	Using SummitNet and Internet.	None	N/A	Ultimately hope to offer public access to this information via the Internet.
---	--	-------------------------------	------	-----	--

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
N/A	\$40,000	\$75,000	\$0	Internal	\$115,000

An international system using many technologies is being developed.	UNIX, NT, MVS, VMS, OS400, etc.	Using SummitNet and Internet plus AAMVAnet.	None	N/A	N/A
---	---------------------------------	---	------	-----	-----

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$500,000	\$200,000	\$1,600,000	\$80,000	\$40,000	\$2,420,000

Servers will be used; additional storage space will be procured. Gateway hardware & provider connections.	Web servers in Oracle. Gateway software for EDI/EFT.	Internet. EDI/EFT standards.	None	Work within the current law regarding electronic signatures, etc.	Through use of the Internet server, with integration to database systems.
---	--	------------------------------	------	---	---

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
	\$80,000	\$200,000	\$0	\$20,000	\$300,000

PC, GPS receiver, navigation screen.	Flight planning software, navigation software, GPS post referencing software.	N/A	None	N/A	N/A
--------------------------------------	---	-----	------	-----	-----

Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$20,000	\$30,000		\$0	Inc. in other costs.	\$50,000

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

<b>PROJECT 5</b> — Continue the development of the ISTE Management Systems and their integration with TIS.								Imaging and GIS integration.		Application Development		X
										Hardware		
Software												
Networking												
Training												
Other												
Platform Type			Implementation Schedule									
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01					
	X	X										

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
Increase server capacity.	Oracle based.	Replicate data servers between Headquarters and district/area offices.	None	N/A	N/A
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
\$100,000	\$40,000	\$400,000	\$0	\$40,000	\$580,000

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

**MONTANA STATE UNIVERSITY (MSU)**

<b><u>PROJECT 1</u></b> — Replace current Bozeman administrative information systems or migrate those systems to a Unix based, client/server based platform; seek a system that would provide a common platform for the MSU system.								Client/server system implementation; work-flow management; business process re-engineering.	<b>Application Development</b>	X
									<b>Hardware</b>	X
									<b>Software</b>	X
									<b>Networking</b>	
									<b>Training</b>	
									<b>Other</b>	
<b>Platform Type</b>			<b>Implementation Schedule</b>							
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01			
	X	X								

<b><u>PROJECT 2</u></b> — Implement a campus ATM network backbone and convert clients to ATM-based data network system on the basis of need for either speed of connection or need for greater functionality (e.g., voice+data+video connectivity at the desktop PC).								ATM communications technologies; LANE protocols for LAN emulation over ATM; distance learning; voice/data/video integration and whiteboard interactions.	<b>Application Development</b>		
									<b>Hardware</b>	X	
									<b>Software</b>	X	
									<b>Networking</b>	X	
									<b>Training</b>	X	
									<b>Other</b>		
<b>Platform Type</b>			<b>Implementation Schedule</b>								
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01				

<b><u>PROJECT 3</u></b> — Replace the current library automation system with a modern system.								Likely client/ server-based system; enhanced support for distance learning; imaging and document management (full-text databases).	Application Development		
									Hardware		X
									Software		X
									Networking		
									Training		X
									Other		
Platform Type			Implementation Schedule								
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01				
	X	X									

<b>PROJECT 4</b> — Provide an integrated suite of services for clients' desktop computer systems: file/print service, standardized e-mail system, calendar scheduling system, etc.										Client/server systems; document management; EDI.	<b>Application Development</b>		
											<b>Hardware</b>		X
											<b>Software</b>		X
											<b>Networking</b>		
											<b>Training</b>		X
											<b>Other</b>		
<b>Platform Type</b>			<b>Implementation Schedule</b>										
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01						
	X	X											

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
Mid-tier Unix systems; PC clients are likely already in place; networking system is in place.	Yet to be determined.	None identified.	Unknown but no long-term increase.	None apparent.	Most systems would not be public accessible because of privacy regulations.
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					Unknown
Not yet determined.	Not yet determined.	Would benefit from state-wide adoption of ATM telephone com. systems and from ATM-based Internet connection.	No on-going impact.	None yet identified.	Develops the on-campus infrastructure in anticipation of wide-spread availability state-wide.
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					Unknown
Not yet determined.	Not yet determined.	None identified.	No on-going impact.	None	Providing enhanced public access is key to the success of this project.
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					Unknown
Not yet determined; likely to be mid-tier equipment capable of running Unix or Windows NT.	Unknown; likely use of Microsoft Exchange, a variety of e-mail clients, Microsoft Scheduler Plus for calendaring, etc.	None	None	None	N/A
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					Unknown

Project Description	Emerging Technology	Project Type
---------------------	---------------------	--------------

<u><b>PROJECT 5</b></u> — Work with faculty and students to develop a community understanding of the level of student access to and use of technology tools and then support the implementation of the resulting plans.												Possible: imaging, doc. management, wireless LANs, mobile computing, multi-media, voice/ data/video integration, distance learning, dial-in access.	<b>Application Development</b>						
													<b>Hardware</b>	X					
													<b>Software</b>	X					
													<b>Networking</b>	X					
													<b>Training</b>	X					
													<b>Other</b>						
<b>Platform Type</b>			<b>Implementation Schedule</b>																
Mainframe	Mid-Tier	PC	FY97	FY98	FY99	FY00	FY01												
		X																	

New Hardware	New Software	Telecommunication Impact	New FTEs	Statutory Changes	Allows Public Access?
--------------	--------------	--------------------------	----------	-------------------	-----------------------

Too early to specify.	Too early to specify.	Too early to specify.	Too early to specify.	None identified.	N/A
Estimated Project Costs (in dollars)					
Hardware	Software	Contracted Services	FTEs	Assoc. Training	TOTAL
					Unknown



# Appendices







## ***ADVISORY GROUPS***

---

### **INFORMATION TECHNOLOGY ADVISORY COUNCIL**

Administration, Department of .....	Lois Menzies, Chair
Agriculture, Department of .....	Ralph Peck
Auditor's Office, State .....	Rusty Harper
Budget and Program Planning, Office of .....	Steve Bender
Commerce, Department of .....	Jon Noel
Montana Lottery .....	Kipp Riebe
Commissioner of Higher Education, Office of the .....	Dr. Richard Crofts
Corrections, Department of .....	Rick Day
Environmental Quality, Department of .....	Mark Simonich
Fish, Wildlife and Parks, Department of .....	Dave Mott
Governor's Office .....	Judy Browning
Historical Society, Montana .....	Sharon McCabe
Judiciary .....	Pat Chenovick
Justice, Department of .....	Dennis Taylor
Labor and Industry, Department of .....	Laurie Ekanger
Legislative Auditor, Office of the .....	Scott Seacat
Legislative Branch .....	Bob Person
Legislative Fiscal Analyst, Office of the .....	Clayton Schenck
Livestock, Department of .....	Larry Petersen
Military Affairs, Department of .....	Doug Booker
Montana State Legislature .....	Representative Joe Quilici
.....	Senator Mignon Waterman
Natural Resources and Conservation, Department of .....	Bud Clinch
Public Health and Human Services, Department of .....	Mike Billings
Public Instruction, Office of .....	Scott Buswell
Public Service Commission .....	Wayne Budt
Revenue, Department of .....	Mick Robinson
Secretary of State .....	Angela Fultz
State Compensation Insurance Fund .....	Eivind Nilsen
State Library, Montana .....	Darlene Staffeldt
Transportation, Department of .....	Bill Salisbury



---

## INFORMATION TECHNOLOGY MANAGERS' GROUP

Administration, Department of	
Accounting and Management Support Division .....	Hank Voderberg
Information Services Division .....	Tony Herbert
Policy, Development, & Customer Relations Bureau .....	Jeff Brandt
Systems Support Bureau .....	Sharon Gorie
Telecommunications Operations Bureau .....	Carl Hotvedt
Computing Operations Bureau .....	Paul Rylander
State Personnel Division .....	Martha Johansen
Agriculture, Department of .....	Bob LaRue
Auditor's Office, State .....	Clay Andrews
Budget and Program Planning, Office of .....	Steve Colberg
Commerce, Department of .....	Gary Wulf
Corrections, Department of .....	Larry DeFrance
Environmental Quality, Department of .....	Tripp Hammer
Fish, Wildlife and Parks, Department of .....	Barney Benkelman
Governor's Office .....	Mary Jo Murray
Helena College of Technology .....	Dave Marshall
Higher Education, Commissioner of .....	Jim Frahm
Historical Society, Montana .....	Ellie Arguimbau
Justice, Department of .....	Jim Oppedahl
Labor and Industry, Department of .....	Wayne Schaff
Legislative Auditor, Office of the .....	Mary Bryson
Legislative Branch .....	Hank Trenk
Legislative Fiscal Analyst, Office of the .....	Jim Turner
Livestock, Department of .....	Carol Robocker-Andersen
Military Affairs, Department of .....	Doug Booker
Natural Resources and Conservation, Department of .....	Bob Auer
Public Health and Human Services, Department of .....	Art Pembroke
Public Instruction, Office of .....	Bob Morris
Public Service Commission .....	Joel Oelfke
Revenue, Department of .....	Bob Cummings
Secretary of State .....	Gregg Wheeler
State Compensation Insurance Fund .....	Ed Benasky
State Library, Montana .....	Jim Senkler
Supreme Court .....	Dana Corson
Transportation, Department of .....	Mike Randall

## SJR 23 INTERIM COMMITTEE

Three working groups were commissioned by the Committee to gather and prepare information for the study: the Accounting Task Force; the Budgeting Task Force; and the Data Management Task Force. The memberships of these groups included the following:

### Accounting Task Force

Representative, Chairperson .....	Karl Ohs
Senator, Vice Chairperson .....	Greg Jergeson
Administration, Department of, Co-coordinator .....	Connie Griffith
Legislative Auditor, Office of the, Co-coordinator .....	Scott Seacat
Administration, Department of .....	Terry Atwood
Administration, Department of .....	Marv Eicholtz
Commissioner of Higher Education, Office of the .....	Laurie Neils
Fish, Wildlife and Parks, Department of .....	David Clark-Snustad
Judiciary .....	Pat Chenovick
Justice, Department of .....	Karen Munro
Montana Association of Counties .....	Beverly Gibson
Public Health and Human Services, Department of .....	Bill Wells
Public Instruction, Office of .....	Kathy Fabiano
Transportation, Department of .....	Bill Salisbury
University of Montana .....	Rosie Keller

### Budgeting Task Force

Senator, Chairperson .....	Del Gage
Representative, Vice Chairperson .....	Mike Kadas
Budget and Program Planning, Office of, Co-coordinator .....	Steve Bender
Legislative Fiscal Analyst, Office of the, Co-coordinator .....	Taryn Purdy
Administration, Department of .....	Tony Herbert
Administration, Department of .....	Mark Cress
Budget and Program Planning, Office of, Co-coordinator .....	Curt Nichols
Commissioner of Higher Education, Office of the .....	Laurie Neils
Judiciary .....	Pat Chenovick
Legislative Fiscal Analyst, Office of the .....	Terry Johnson
Montana Association of Counties .....	Beverly Gibson
Public Instruction, Office of .....	Kathy Fabiano
Revenue, Department of .....	Judy Paynter



## **Data Management Task Force**

Representative, Chairperson .....	Deb Kottel
Representative, Vice Chairperson .....	Peggy Arnott
Administration, Department of, Co-coordinator .....	Linda Belflower
Montana Association of Counties, Co-coordinator .....	Gordon Morris
Justice, Department of, Co-coordinator .....	Jim Oppedahl
Administration, Department of .....	Jeff Brandt
Gallatin County .....	Bill Baldus
Judiciary .....	Pat Chenovick
Legislative Services, Office of .....	Tom Mulvaney
Lewis and Clark County .....	Karen Hruska
Montana Association of Counties .....	Beverly Gibson
Public Instruction, Office of .....	Scott Buswell
Public Instruction, Office of .....	Doug Kosty
Revenue, Department of .....	Judy Jones
Revenue, Department of .....	Larry Finch
Yellowstone County .....	Steve Hellenthal

# GOVERNOR'S BLUE RIBBON TELECOMMUNICATIONS TASK FORCE

## Legislators

Senator .....	Tom Beck
Senator .....	J.D. Lynch
Representative .....	Norm Mills
Representative .....	Joe Quilici

## Governor's Appointees

Affiliation Unknown .....	Jim Pool
Anaconda/Deer Lodge County .....	Cheryl Beatty
AT&T .....	Cathy Brightwell
CommNet Cellular .....	Jeff Tabor
Montana Telephone Association .....	Joan Mandeville
Parmly Billings Library .....	Bill Cochran
Salish Kootenai College .....	Jim Ereaux
TCI Cablevision .....	Doug Johnson
Telemedicine .....	Doris Barta
US West Communications .....	Jim Hayhurst
Western Montana College .....	Cynthia Denton

## Ex-Officio Members

Administrator, Information Services Division .....	Tony Herbert
9-1-1 Advisory Council .....	Lt. Billi Heigh
Affiliation Unknown .....	Ed Van Tighem
Affiliation Unknown .....	Oak Winters
BDM Technologies .....	Tim Sweeney
Bigfork Eagle .....	Marc Wilson
Commissioner, Public Service Commission .....	Danny Oberg
Gallatin Development Corporation .....	Dixie Swenson
KXLO Radio .....	Fred Lark
Meagher County Public Television .....	B.J. Hawkins
Montana Chamber of Commerce .....	David Owen
Montana Independent Telecommunications Systems (MITS) .....	Mike Strand
Touch America .....	Patrick Hogan
University of Montana, Missoula .....	John Cleaveland



---

## SUMMITNET EXECUTIVE COUNCIL

Administration, Department of .....	Lois Menzies, Chair
Commissioner of Higher Education, Office of the .....	Dr. Richard Crofts
Custer County Commissioner .....	Janet Kelly
Justice, Department of .....	Dennis Taylor
Legislative Branch .....	Bob Person
Public Instruction, Office of .....	Jack Copps
Revenue, Department of .....	Mick Robinson



# ***TASK FORCE RECOMMENDATIONS***

---

## **GOVERNOR'S BLUE RIBBON TELECOMMUNICATIONS TASK FORCE**

To encourage the transition to a robust, competitive, telecommunications marketplace, and to remove barriers to competition and disincentives to investment in telecommunication deployment and use, the Governor's Blue Ribbon Telecommunications Task Force (BRTF) has developed recommendations regarding:

**Universal Access Program.** A Universal Access Program would allow access to advanced services for schools, libraries, and rural healthcare providers; and provide universal access to all Montanans. It is recommended by the BRTF that funding be provided for this program to cover the 1997-99 biennium. Funding for the Universal Access Program would be based on the retail revenues for all intrastate telecommunications services as defined in 15-53-101(6) MCA. The Public Service Commission (PSC) would administer this program.

**Universal Service Fund.** The BRTF recommends that the Montana PSC review federal implementation of the Federal Act, evaluate the impact of federal funds for universal service and access goals in Montana, and draft legislation for the establishment of a state universal service fund. This should be completed for the 1999 legislative session if necessary and meet state telecommunication goals.

**Interconnection.** The BRTF recommends that the PSC be given authority to mediate, arbitrate, and approve negotiated agreements of interconnection between providers in a competitive market. The current statutes requiring resolution by state district court eminent domain proceedings should be repealed.

**Dispute Resolution.** As local competition becomes a reality in Montana, the need for interconnection arrangements between providers will increase. Issues between companies regarding interconnection terms and rates will certainly occur. The process of litigation to resolve conflicts is not the best solution to settling these issues. As more providers participate in the local markets, the need for an efficient, cost effective process to resolve conflicts will be increasingly important. The Montana PSC is the most logical entity to resolve issues upon which



parties cannot reach a negotiated agreement. This would be consistent with the Federal Act. Negotiation of interconnection agreements should be between the parties. If the parties are unable to reach an agreement, the procedure for dispute resolution included in the Federal Act should be adopted for Montana. Mediation/arbitration by the PSC should be implemented under a uniform set of standards and procedures.

**Registration.** Telecommunication providers should be required to register with the Montana PSC and/or the Montana Department of Revenue (DOR) prior to conducting business in the state, to monitor the development of competition and to facilitate the administration of telecommunication taxation.

**Definition of Telecommunication Providers.** It is recommended that as part of the final draft of legislation, the Legislative Committee consult with personnel at the Montana DOR and research the Federal Act to define "telecommunications provider."

**Promotions.** The BRTF recommends that 69-3-305(5) MCA be amended to allow more flexibility in offering promotions.

**Competitive Rates.** The Montana PSC should move quickly to examine any non-cost based differential (taking into account any explicit Universal Service Funding) between residence and business prices, and rates for other services such as toll and access to reflect underlying cost structures. This will promote fair competition, encourage investment, and protect consumers from potentially greater price increases in the long run. Regulated providers should quickly seek any necessary adjustments by filing an application with the PSC. The Montana PSC may elect to implement any necessary rate changes in approximately equal steps during a transition period not to exceed three years. The Local Exchange Providers may file applications which seek the above adjustments in a manner which does not affect the earning of the provider, and the PSC shall expeditiously render a decision based on the merits of such application. The PSC retains its jurisdiction to pursue earning investigations, and therefore, has remedies for perceived excess earnings during the transition period.

**Capital Recovery.** The emerging competitive marketplace will force the rapid introduction of new technologies. As a result, current depreciation lives must be reviewed to ensure that they provide the recovery necessary to encourage the deployment of new technologies in Montana. In establishing depreciation rates, the Montana PSC must ensure that regulated companies have an opportunity for timely recovery of their capital investments in this competitive marketplace. While depreciation and capital recovery practices may differ initially between existing providers and new entrants, the PSC, when establishing new depreciation rates, must use forward-looking competitive market lives similar to those used by competitive telecommunication providers.

**Resale.** Montana should implement policies on Resale consistent with the Federal Act and FCC rules. Services that are available for resale at a discounted rate do not include carrier access services. Wholesale services will only be available to telecommunication carriers for the purpose of selling those services to the carrier's customers. They cannot be purchased for predominantly internal use. Consistent with the Federal Act, Section 251 (c)(4)(B), resale between categories of customers is prohibited until the Montana PSC eliminates any pricing disparity for the same service offered to different categories of customers. For example, residential services may not be resold to business customers. Any explicit Universal Service support to a specific category of customers may not be redistributed to another category of customer, through resale. Lifeline and other means-tested service offerings can only be resold to customers who qualify for the service. Resale will be limited to retail products or services made available by a provider to end user customers.

**Cost/Price Relationships.** The PSC is responsible for ensuring that prices for regulated telecommunications services are above relevant costs to prevent cross subsidization and predatory pricing. During the transition to local competition, the PSC and providers are encouraged to review and remove any implicit subsidies and any other government imposed mandates or restrictions which inhibit competition.

**Unbundling.** Montana should implement policies on unbundling consistent with the Federal Act and with FCC rules. (Reference Telecommunications Act of 1996) Network unbundling should proceed, under the jurisdiction of the FCC and PSC, at a reasonable speed based on demonstrated demand.

**Interconnection.** Interconnection is an integral part of the Federal Act as interconnection of competing local exchange networks is an essential element in the development of a fully competitive local market. Montana should implement policies on interconnection consistent with the Federal Act and FCC rules.

**Regulation.** Government policies, statutes, rules, and regulations should encourage competition on a neutral basis and should neither competitively advantage nor disadvantage any telecommunications provider. The PSC is encouraged to consider the benefits of moving from rate of return regulation to alternative forms such as price regulation. Competition will not occur ubiquitously nor simultaneously across the full spectrum of services for the full body of customers. Some customers will continue to require protection during the transition to a fully competitive market.

**Competitive Parity — Taxation.** The BRTF recommends that participants in the telecommunications industry should be taxed on an equivalent basis with one another. The telecommunications industry should be taxed in the same manner and at the same level as



other commercial industrial businesses. Telecommunication taxes should be easy to administer and collect, and compliance should also be easy.

**Dialing Parity.** The ability for customers to route their telecommunications to the provider of their choice without the need to dial extra codes is an important element in the development of a fully competitive telecommunications market in Montana. The goal is to assure that dialing parity is available to all providers of telephone exchange and toll services in Montana. The PSC should move forward in developing necessary rules to allow implementation in Montana consistent with the terms of the Federal Act.

**Review of Definitions.** The definitions of basic and advanced universal service and access are evolving standards. These definitions should be reviewed prior to each regular legislative session by the Montana PSC and a report developed, listing any recommendations, and sent to the Governor and the legislature.

**Access Policy.** It is the policy of the State of Montana that access to advanced telecommunication and information services which are available in urban areas of the state shall also be available to rural areas of the state to the extent that is technically feasible and economically reasonable.

**Advanced Telecommunications.** Advanced telecommunications services are currently defined as high speed (56K and above), dedicated and/or switched, broadband telecommunication capability that enables users to originate and receive high quality voice, data, graphics, and video telecommunications using any technology.

**Number Portability Policy.** Number portability — the ability of customers to retain their telephone number when they switch providers within their local exchange area — is an important element in the development of fully competitive local exchange markets. Number portability should be provided, to the extent technically feasible, in accordance with the requirements prescribed by the FCC. The costs to implement number portability should be borne by all telecommunication providers on a competitively neutral basis. Rural Local Exchange Carriers may petition for exemption of this requirement under the Federal Act.

**Universal Access Definition.** Universal Access is the policy of ensuring that all Montanans have access to advanced telecommunications technologies. In order to make access available to all citizens, an information safety net must be established whereby these services would, at a minimum, be available through a library, school, or other public institution in every community in the state.

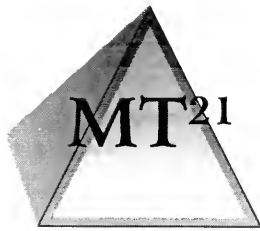
**Universal Service Goal.** The goal is to make "basic" telecommunications services available at reasonable prices to all Montanans.

**Basic Service Elements.**

- ▲ One party service.
- ▲ Voice-grade line capable of carrying data.
- ▲ Touch-tone.
- ▲ Equal access to long distance carriers.
- ▲ Access to Telephone Relay Systems for the hearing- or speech-disabled customers and other federal mandates.
- ▲ Access to emergency services.
- ▲ Access to directory service.



*Preparing Montana for the 21<sup>st</sup> Century*



# STATUTES

---

## MONTANA CODE ANNOTATED (MCA)

Provided below are MCA excerpts that define the responsibilities of the Department of Administration, Information Services Division, in delivering information technology services to state government.

---

### MCA 2-17-501

#### *Responsibilities of the Director of the Department of Administration for data processing.*

- (1) Except as provided in subsection (2), the director of the department of administration, in cooperation with state agencies, shall:
  - (a) establish policies and a statewide plan for the operation and development of data processing for state government;
  - (b) review and approve agency specifications and procurement methods for the acquisition of data processing equipment;
  - (c) review and approve agency specifications and procurement methods for the acquisition of software to ensure network compatibility and conformity with the statewide data processing plan;
  - (d) review and approve all contracts for private-sector data processing services to ensure conformance with the statewide data processing plan and statewide data network; and
  - (e) operate and maintain a central computer center and a statewide data network for the use of all state agencies and political subdivisions.
- (2) (a) The responsibilities of the director under subsections (1)(b) through (1)(d) do not apply to the Montana university system or to the office of the superintendent of public instruction. The university system and the office of the superintendent of public instruction are exempt from the requirements of subsections (1)(b) through



- (1)(d) unless a data processing activity proposed by the university system or the office of the superintendent of public instruction affects the operation of the central computer center or the statewide data network. If the university system or the office of the superintendent of public instruction determines that the central computer center or the statewide data network will be affected by the proposed activity, the agency shall notify the director and the proposed activity is subject to the requirements of subsections (1)(b) through (1)(d).
- (b) For purposes of subsection (2)(a), a data processing activity affects the operation of the central computer center or the statewide data network if it adds to the processing workload, capacity, or support service requirements of the central computer center or the statewide data network.
- (3) When reviewing data processing activities submitted by the university system or the office of the superintendent of public instruction under subsections (1)(b) through (1)(d), the department shall consider and make reasonable allowances for the unique educational needs and characteristics of the university system and the office of the superintendent of public instruction to communicate and share data with units of the university system and with school districts.
- (4) As used in subsections (1) and (2), the following definitions apply:
- (a) "Central computer center" means any:
- (i) shared or sharable computer system and facilities provided by the department for use by government agencies; or
  - (ii) computer operations and software development support services provided by the department.
- (b) "Statewide data network" means any telecommunications facility, circuits, equipment, or software administered by the department for the transmission of data from one computer to another by government agencies.

## History

En. Sec. 1, Ch. 175, L. 1979; amd. Sec. 2, Ch. 486, L. 1983; MCA 1981, 18-4-111; redcs. 2-17-501 by Code Commissioner, 1983; amd. Sec. 1, Ch. 207, L. 1985; amd. Sec. 1, Ch. 216, L. 1985; amd. Sec. 1, Ch. 76, L. 1993.

## Compiler's Comments

**1993 Amendment.** Chapter 76 in (1), after "administration," inserted "in cooperation with state agencies"; in (1)(a), after "plan," deleted "in cooperation with state agencies"; in (1)(b), at end after

"equipment," deleted "to insure network compatibility and conformity with the statewide data processing plan"; inserted (1)(c) requiring review and approval of agency specifications and procurement methods; at end of (1)(d) inserted "and statewide data network"; in (1)(e) substituted "statewide data network" for "data processing equipment pool"; deleted former (2)(a) that read: "The responsibilities of the director under subsection (1) do not apply to the office of the superintendent of public instruction, and that office is exempt from the requirements of subsection (1) unless a proposed activity of that office related to data processing affects the operation of the central computer center and data processing equipment pool. If the office of the superintendent of public instruction determines that such an impact may occur, it shall notify the director, and the proposed activity shall be subject to the requirements of subsection (1)(b)"; substituted (2)(a) concerning nonapplication to the University System and Office of the Superintendent of Public Instruction for former (2)(b) that read: "(b) The responsibilities of the director under subsection (1)(b) do not apply to the Montana university system, and the university system is exempt from the requirements of subsection (1)(b) unless a proposed university system activity related to data processing impacts the operation of the central computer center and data processing equipment pool. If the university system determines that such an impact may occur, the system shall notify the director, and the proposed activity is subject to the requirements of subsection (1)(b)"; inserted (2)(b) clarifying data processing activity; inserted (3) regarding review of data processing activities submitted by the University System or the Office of Public Instruction; inserted (4) defining central computer center and statewide data network; and made minor changes in style.

**1985 Amendments — Composite Section.** Chapter 207 near beginning of (1) after "department," inserted "of administration"; near middle of (1)(b) after "equipment," deleted "excluding specifications and methods relating to instruction and research in the university system"; in (2)(a) changed "this section" to "subsection (1)" in two places; and inserted (2)(b) relating to the exemption for the University System.

Chapter 216 in (2)(a) in two places substituted "subsection (1)(b)" for "this section," inserted "unless" clause at end of first sentence, and inserted "If the office of the superintendent of public instruction determines that such an impact may occur, it shall notify the director, and the proposed activity shall be subject to the requirements of subsection (1)(b)."

In preparation of the composite of the Ch. 207 and Ch. 216 amendments to this section, the Code Commissioner has codified the provision in subsection (2)(a) from Ch. 207 that exempts the Superintendent from all of subsection (1) rather than just (1)(b) as provided in Ch. 216, because the exemption in Ch. 207 is broader and encompasses the exemption granted in Ch. 216.

**1983 Amendment.** Substituted language providing for control by the Department of Administration for former text that read: "The budget director shall:



- (1) establish guidelines for the operation and development of data processing services by or for state government;
- (2) set priorities for the development and acquisition of data processing systems;
- (3) approve the procurement of data processing equipment before such equipment is acquired for state government by the department of administration;
- (4) approve the addition of data processing staff; and
- (5) review and approve all contracts for private-sector data processing services."

## **Cross References**

Supervision of mailing, data processing, duplicating, copying, and telephone facilities, 2-17-301.

---

## **MCA 2-17-502**

### ***State information technology advisory council.***

- (1) The department of administration shall create a state information technology advisory council under 2-15-122.
- (2) The members of the advisory council must be selected from a diverse group in order to adequately represent the interests of state agencies, including the university system.
- (3) In addition to the advisory functions assigned by the department, the information technology advisory council shall review statewide information and data processing policies, make recommendations regarding the application of new information processing technology in state government, and advise the department on long-term strategic planning for the use of information processing technology in state government.

## **History**

En. Sec. 3, Ch. 486, L. 1983; amd. Sec. 2, Ch. 76, L. 1993.

## **Compiler's Comments**

**1993 Amendment.** Chapter 76 in (1) substituted "information technology" for "data processing"; inserted (3) regarding functions of the information technology advisory council; and made minor changes in style.

**Codification.** Section 4, Ch. 486, L. 1983, instructed that this section be codified in Title 18. The only apparent reason for the codification instruction was to make 18-1-101, defining "department"

as "department of administration," applicable. Since the Department's duties relating to property, systems development, and management are generally contained in this chapter, the Code Commissioner inserted the words "of administration" after "department" in (1) and codified this section in this chapter.

## MCA 2-17-503

***Security responsibilities of department of administration.*** The department of administration is responsible for providing centralized management and coordination of state policies for security of data and information technology resources and shall:

- (1) establish and maintain the minimum security standards and policies to implement 2-15-114, including the physical security of central and backup computer facilities consistent with these standards;
- (2) establish guidelines to assist agencies in identifying electronic data processing personnel occupying positions of special trust or responsibility or sensitive locations;
- (3) establish standards and policies for the exchange of data between data centers or departments by hardwired or nondedicated telecommunications to ensure that exchanges do not jeopardize data security and confidentiality;
- (4) coordinate and provide for a training program regarding security of data and information technology resources to serve governmental technical and managerial needs;
- (5) include appropriate security requirements in the specifications for solicitation of state contracts for procuring data and information technology resources; and
- (6) upon request, provide technical and managerial assistance relating to the security program.

## History

En. Sec. 3, Ch. 592, L. 1987.

## Cross References

Department of Administration responsibilities, 2-17-323.



## MCA 2-17-301

### *Supervision of mailing, duplicating, copying, and telephone facilities.*

- (1) The department of administration shall maintain and supervise any central mailing, messenger service, duplicating, and copying facilities for state agencies in the capitol area.
- (2) The department shall maintain and supervise any central telephone switchboard for state agencies located in Helena.
- (3) Cost records shall be maintained and agencies shall be billed for services received.

### **History**

(1), (3)En. Sec. 6, Ch. 271, L. 1963; amd. Sec. 1, Ch. 298, L. 1967; amd. Sec. 3, Ch. 101, L. 1969; amd. Sec. 2, Ch. 313, L. 1971; amd. Sec. 80, Ch. 326, L. 1974; Sec. 82-3306, R.C.M. 1947; (2)En. Sec. 7, Ch. 271, L. 1963; amd. Sec. 98, Ch. 326, L. 1974; Sec. 82-3307, R.C.M. 1947; R.C.M. 1947, 82-3306, 82-3307; amd. Sec. 1, Ch. 486, L. 1983.

### **Compiler's Comments**

**1983 Amendment.** In (1) following "messenger service," deleted "data processing."

## MCA 2-17-302

### *Communication systems.*

- (1) The department of administration shall:
  - (a) provide communication services to all agencies of state government. The state communications system must be capable of passing voice, video, data, written information, and other forms of communication to and from distant points.
  - (b) exercise general supervision over all existing communications systems for all agencies of state government;
  - (c) plan, review, and approve any additional installations of communications equipment and systems for all agencies of state government, including mail equipment for state agencies within a 10-mile radius of the capitol area. In approving the installation of additional communications equipment or systems, the

- department shall first consult with and consider the recommendations and advice of the executive heads of the various state agencies.
- (d) approve standards and procedures for selection, acquisition, and operation of communications equipment;
  - (e) ensure that all communications equipment is properly maintained. The department is authorized to establish a centralized maintenance program for all state communications equipment and to contract the equipment maintenance if it is in the state's best interest. The department shall maintain cost records and bill agencies for services rendered.
  - (f) provide assistance to the legislature, governor, and state agencies relative to state and interstate communication matters;
  - (g) provide a means whereby political subdivisions of the state may utilize the state communications system, upon terms and under conditions as the department may establish;
  - (h) accept federal funds granted by congress or by executive order for any purposes of this section, as well as gifts and donations from individuals and private organizations or foundations;
  - (i) foster the development of new and innovative communications systems and techniques within the state, including but not limited to satellite communications and high-speed, high-density data transfer. To carry out the purposes of this section, the department may contract with qualified private organizations, foundations, or individuals if it is in the state's best interest.
  - (j) pay for and allocate to state agencies, as part of services rendered, the cost of any performance audit of the state communications system performed by or at the direction of the legislative auditor.
- (2) The department may provide assistance to political subdivisions or nonprofit organizations, upon terms that the department may establish, relative to state and interstate communications systems and techniques.
- (3) Adequate rules for the use of any communications equipment and facilities must be adopted by the:
- (a) department for executive branch agencies;
  - (b) supreme court for judicial branch agencies; and
  - (c) legislature by joint rule for members of the legislature and legislative branch agencies.

## **History**

En. Sec. 3, Ch. 230, L. 1971; amd. Sec. 6, Ch. 215, L. 1974; amd. Sec. 86, Ch. 326, L. 1974; amd.



Sec. 1, Ch. 315, L. 1975; amd. Sec. 1, Ch. 341, L. 1977; R.C.M. 1947, 82-3325; amd. Sec. 1, Ch. 307, L. 1983; amd. Sec. 1, Ch. 42, L. 1987; amd. Sec. 1, Ch. 2, L. 1993.

## Compiler's Comments

**1993 Amendment.** Chapter 2 in (1)(c), at end of first sentence, inserted "including mail equipment for state agencies within a 10-mile radius of the capitol area"; and made minor changes in style. Amendment effective January 25, 1993.

**1987 Amendment.** Inserted (1)(i), relating to audit costs; in (3) substituted "must be adopted by the" for "The department shall adopt"; and inserted (3)(a) through (3)(c) setting forth who in each branch is to adopt the rules.

**1983 Amendment.** In (1)(i) after "techniques" substituted "within the state" for "for state government"; and inserted (2) authorizing assistance to political subdivisions or nonprofit organizations with regard to communications systems and techniques.

## MCA 2-6-203

### *Secretary of state's powers and duties.*

- (1) In order to insure the proper management and safeguarding of public records, the secretary of state shall undertake the following:
  - (a) establish guidelines for inventorying, cataloging, retaining, and transferring all public records of state agencies;
  - (b) review and analyze all state agency filing systems and procedures and approve filing system equipment requests;
  - (c) establish and operate the state records center, as authorized by appropriation, for the purpose of storing and servicing public records not retained in office space;
  - (d) gather and disseminate information on all phases of records management, including current practices, methods, procedures, and devices for the efficient and economical management of records;
  - (e) operate a central microfilm unit which will microfilm, on a cost recovery basis, all records approved for filming by the office of origin and the secretary of state; and
  - (f) approve microfilming projects and microfilm equipment purchases undertaken by all state agencies.
- (2) Upon request, the secretary of state shall assist and advise in the establishment of

records management procedures in the legislative and judicial branches of state government and shall, as required by them, provide services similar to those available to the executive branch.

## History

(1)En. 82-3335 by Sec. 4, Ch. 339, L. 1977; Sec. 82-3335, R.C.M. 1947; (2)En. 82-3337 by Sec. 6, Ch. 339, L. 1977; Sec. 82-3337, R.C.M. 1947; R.C.M. 1947, 82-3335, 82-3337; amd. Sec. 1, Ch. 378, L. 1991.

## Compiler's Comments

**1991 Amendment.** Throughout substituted references to Secretary of State for references to Department of Administration. Amendment effective July 1, 1991.

---

## MCA 2-6-204

### *State records committee approval.*

The committee shall approve, modify, or disapprove the recommendations on retention schedules of all public records to determine which documents not included in the provisions of this part are to be designated public records and approve agency requests to dispose of such public records.

## History

En. 82-3338 by Sec. 7, Ch. 339, L. 1977; R.C.M. 1947, 82-3338(3).

---

## MCA 2-6-205

### *Preservation of public records.*

All public records are and shall remain the property of the state. They shall be delivered by outgoing officials and employees to their successors and shall be preserved, stored, transferred, destroyed, or disposed of and otherwise managed only in accordance with the provisions of this part.



## **History**

En. 82-3334 by Sec. 3, Ch. 339, L. 1977; R.C.M. 1947, 82-3334(2).

## **Cross References**

Proceedings to compel delivery of records, 2-6-107.

# **MCA 2-6-206**

### ***Protection of essential records.***

- (1) In order to provide for the continuity and preservation of civil government, each elected and appointed officer of the executive branch shall designate certain public records as essential records needed for an emergency or for the reestablishment of normal operations after any such emergency. A list of such records shall be forwarded to the secretary of state. The list shall be reviewed from time to time by the elected or appointed officers to insure its accuracy. Any changes or revisions shall be forwarded to the secretary of state.
- (2) Each elected and appointed officer of state government shall insure that the security of essential records is accomplished by the most economical means possible. Protection of essential records may be by vaulting, planned or natural dispersal of copies, storage in the state archives, or any other method approved by the secretary of state.
- (3) Reproductions of essential records may be by photocopy, magnetic tape, microfilm, or other methods approved by the secretary of state.

## **History**

En. 82-3341 by Sec. 10, Ch. 339, L. 1977; R.C.M. 1947, 82-3341; amd. Sec. 2, Ch. 378, L. 1991.

## **Compiler's Comments**

**1991 Amendment.** Throughout substituted references to Secretary of State for references to Department of Administration. Amendment effective July 1, 1991.

## **Cross References**

Custody and preservation of records by Secretary of State, 2-6-111. Preservation of records — state archives, Title 22, ch. 3, part 2.

---

## MCA 2-6-212

### *Disposal of public records.*

- (1) Except as provided in subsection (2), no public record may be disposed of or destroyed without the unanimous approval of the state records committee. When approval is required, a request for the disposal or destruction must be submitted to the state records committee by the agency concerned.
- (2) The state records committee may by unanimous approval establish categories of records for which no disposal request is required, providing those records are retained for the designated retention period.

### History

En. 82-3339 by Sec. 8, Ch. 339, L. 1977; R.C.M. 1947, 82-3339; amd. Sec. 1, Ch. 173, L. 1981.

### Compiler's Comments

**1981 Amendment.** Inserted "Except as provided in subsection (2)" at the beginning of (1); inserted (2) allowing categories of records for which no disposal request is required; and made changes to conform to the exception.

### Statement of Intent

The statement of intent attached to SB 187 (Ch. 173, L. 1981) provided: "The intent is to have the State Records Committee create by rule categories of records of minor importance for which agencies would be relieved of the burden of repetitively submitting disposal requests; for example:

- (a) motor vehicle applications that are being microfilmed;
- (b) inactive teacher certification records that are being microfilmed;
- (c) interstate invoices in the statewide budget and accounting system."

---

## MONTANA OPERATIONS MANUAL (MOM)

The Department of Administration develops policies and procedures to guide the use of information resources and systems by providing minimum standards for the planning, acquisition, development, security, and disposal of automated information systems. These policies and procedures are documented in MOM and in the *Administrative Rules of Montana*.



MOM documents automated-information-systems policies and procedures to be followed by all state agencies, except the Montana university system and the Office of Public Instruction. The following summarizes these MOM policies:

**A. Control and coordination ..... 1-0210.00**

1. The Department of Administration will insure conformity with the statewide data processing plan and network compatibility by establishing policies, reviewing and approving agency specifications and procurement methods for data processing equipment, reviewing and approving all contracts for private sector data processing services, and operating and maintaining a central computer center.
2. The Department of Administration will coordinate the Information Technology Advisory Council whose mission is to improve the effectiveness of agency operations and state government as a whole through the appropriate use of computers and information processing technology.

**B. Information system planning ..... 1-0220.00**

1. Agencies should adopt formal planning and review processes for information systems environments.

**C. Information system acquisition ..... 1-0230.00**

1. All computer hardware and software procurement shall comply statute which governs the procurement of supplies and services.
2. Agencies should develop an information system needs analysis, to review data and information management issues, communications, compatibility, and software requirements, when planning major improvements to their information systems.
3. Specifications for procurement of hardware and software should clearly define the unique requirements of the agency without being unduly restrictive.
4. Agencies should evaluate the available financing alternatives for data processing and office automation equipment, select the most cost/beneficial method, or justify, in writing, the use of another alternative.
5. Agencies should obtain written approval from the Information Services Division prior to procurement of computers and related hardware and for bids and

contracts for private data processing services.

6. Department of Administration will select and support equipment and software for inclusion under term contracts and require term contract items to be compatible with the state's compatibility standards.

**D. Software acquisition considerations ..... 1-0232.00**

1. Agencies shall maintain policies and procedures for planning and managing information systems development projects. Software may be procured from a vendor or developed by staff personnel, private sector consultants, or Information Services Division. Planning and managing systems development projects should include the following considerations:
  - a. Information systems should be designed so that data can be shared. Inter-departmental sharing should be considered when developing systems.
  - b. Although the names of the components may vary, design and development methods should consist of phases and tasks, documentation, and approval points.
  - c. Software design should describe how the system will implement industry recognized controls.
  - d. Application specific software should include adequate documentation.
  - e. Agencies should establish a policy which defines the documentation necessary for changes to production systems.
  - f. Systems development projects should include consideration for the acquisition of existing software as an alternative to custom written software.
2. Data processing services procurements should adhere to Management Memo I-88-4-6 which defines selection and use of consulting services.
3. All purchased software is subject to the Copyright Act of 1976 and the software amendments of 1980 unless otherwise indicated. Each agency should ensure that proprietary software copyright laws are not being violated as a result of an agency's use of that software.



4. The Department of Administration will provide agencies with support for data processing and office automation software. Emphasis will be placed on support for products that are compatible with the direction of the state communications network. Each software product supported by ISD has been assigned one of four support levels: full; limited; sunset; special case.

**E. Communication acquisition considerations ..... 1-0232.00**

1. The following standards for hardware and software procurement must be met for use of the state's telecommunication network.
  - a. The primary standard used by the state of Montana for distribution of electronic information is IBM Systems Network Architecture (SNA).
  - b. Data may be transmitted via the network provided it conforms to either Synchronous Data Link Control (SNA/SDLC) or Token Ring (IEEE 802.5) protocols.
  - c. Network nodes (devices) should be capable of functioning as a physical unit type 2.1.
  - d. LU 6.2 protocols or Advanced Program to Program Communications (APPC) are used to establish communicating sessions.
2. Local Area Networks (LANs) will be managed as an integral part of the statewide telecommunications network. The standard LAN topology is Token Ring (i.e., international standard IEEE 802.5).
  - a. ISD will purchase and install Token Ring hardware and software components;
  - b. ISD will provide technical staff to assist agencies with LAN implementation and ongoing changes to the LAN configuration.
  - c. ISD will provide problem tracking and resolution services designed to maximize the availability and performance of the LAN to the user agency;
3. Private data networks established for the exclusive use of an agency will not be approved when the routing of the desired service duplicates a capability available on the central facility.

**F. Contingency planning for information systems . . . . . 1-0240.00**

- 1. Agencies shall maintain contingency plans for all information processing centers which support essential functions and critical applications.
- 2. ISD will establish and maintain a disaster contingency plan for the central computer facility.

**G. Information system security . . . . . 1-0250.00**

- 1. Agencies shall implement security measures for the protection of their data and information technology resources.
- 2. Agencies shall authorize access to their information technology resources by designating certain persons as users and authorizing such persons to access these resources in the manner necessary for performing their duties.
- 3. The Department of Administration will allow the general public to access the state telecommunications network and the central computer providing access systems conform to established guidelines.

**H. Disposal of information systems . . . . . 1-0260.00**

Any system that is no longer needed by an agency should be removed in its entirety from the computer upon which it resides.

---

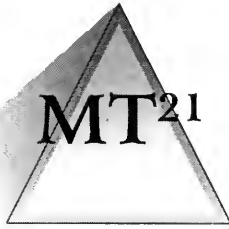
# ADMINISTRATIVE RULES OF MONTANA (ARM)

The Department of Administration must approve the installation, modification, or removal of all telecommunication systems, and ARM documents policy governing the acquisition and use of those systems. The following summarizes these ARM policies:

- A. The state’s telecommunications facilities are provided principally for the conduct of state business.
- B. State agencies are individually responsible for enforcing the state’s telecommunication systems rules and for cost incurred for use of the systems.



- C. The state telecommunication systems are available for use by political subdivisions of the state, subject to authorization by the department of administration based on formal written request by the subdivision.
- D. The state telecommunication systems are available for use by in-state, non-profit organizations which meet specified criteria.
- E. All records of use of telecommunication systems are public documents and subject to review by the public, unless protected by statute.



# ***ENTERPRISE STANDARDS AND POLICIES***

During the past few years, several white papers and working draft documents have been published to identify directions, policies, procedures, standards, and recommendations for the acquisition and management of enterprise information technology resources. The following is a summary of these works.

---

## **ENTERPRISE INFORMATION SYSTEM**

In 1994, a draft document was developed detailing the implementation of the enterprise information system (Novell 4.x implementation). The "Enterprise Information System for State of Montana" document has been adopted by ITMG.

---

## **ITMG DATABASE DIRECTIONS**

In 1993, ITMG adopted the "Database Directions" document, which defines standards and guidelines for the selection of database software. Since then, the state has established Oracle as the enterprise database standard. The following summarizes key standards and recommendations from the Database Directions document:

- ▲ Open standards.
- ▲ Relational architecture.
- ▲ SQL-89 conformance.
- ▲ Integrity services controlled by the RDBMS.
- ▲ Record locking, application rollback, application resource release, and deadlock detection.
- ▲ Full distributed transaction support for distributed systems.



- ▲ Functionally rich set of utilities for support and development.
- ▲ Support for a variety of programming languages, both 3GL and 4GL.
- ▲ Open system approach to OLTP.
- ▲ Support of numerous vendor software offerings for client/server and GUI applications with Remote Data Management (RDM).
- ▲ Data dictionary or catalog structures maintained through SQL commands.
- ▲ Standard security via user identification and password validation with cooperation with external security systems in place on that platform.
- ▲ Data integrity through recovery with rollback, journaling, and recovery facilities.
- ▲ Backup facilities allowing for continuous operations.
- ▲ Robust end-user capabilities.
- ▲ ANSI and ISO standards conformance.
- ▲ Access to non-relational data.
- ▲ Portability or communication with multiple platforms.
- ▲ Support of state network protocols.
- ▲ Use of existing development skill set.
- ▲ Languages and tools that work on multiple hardware/operating system environments.

---

## IMAGING

In 1996, ITMG and ITAC adopted the "Electronic Imaging Standards" document. Management and technical issues relating to the following subjects are addressed within that document.

- ▲ Document Processing and Workflow

- ▲ Storage
  - Recording Permanence
  - Storage Environment
- ▲ Legal Considerations
  - Evidence and Authenticity Requirements
- ▲ Retention Schedules
- ▲ Public Access and Privacy
  - Segregating Exempt and Non-exempt Information
  - Access Through Time
  - Ability to Make Copies
- ▲ Technical Documentation
  - System Documentation
- ▲ Operational Documentation
- ▲ Security
- ▲ Legal Expungement
- ▲ Integration with Existing and Other Information Systems
- ▲ Scanner
- ▲ Quality Control
- ▲ Conversion
  - In-house Conversion
  - Service Bureau/Imaging Contracted Services Conversion
- ▲ Indexing
  - Index Location
  - Indexing Parameters
  - Index Data Entry
- ▲ Security
  - Media Selection



Backup  
Access Restrictions

- ▲ System Migration
  - Vendor Stability
  - System Obsolescence
  - Media Longevity
  - Migration Strategies
- ▲ Disaster Recovery
- ▲ Planning

---

## MID-TIER COMPUTING

The following standards and recommendations are contained in the "Report of Mid-Tier Computing Standards and Recommendations" document adopted by ITMG and ITAC in 1995:

### I. Operating System (OS)

#### A. General OS

##### Standard

- ▲ The State supports dual OS standards for mid-tier systems. The operating systems are UNIX and Windows NT.

#### B. UNIX OS

##### Standards — UNIX OS MUST:

- ▲ be POSIX compliant.
- ▲ be SPEC1170 compliant.
- ▲ be XPG3 branded. The OS MUST continue to meet UNIX branding standards as they evolve.
- ▲ support application independence by being able to run applications that are not married to either the OS or the hardware platform.
- ▲ adhere to standards-based APIs that facilitate the porting of applications from one system to another.

##### Recommendations — UNIX OS:

- ▲ SHOULD NOT contain any proprietary APIs that, if used, would compromise the goal of application portability (i.e. general business

applications, excluding Oracle).

- ▲ MAY contain proprietary APIs for use by general system utilities, such as system management and backup/restore.
- ▲ SHOULD support the Open System's Foundation (OSF) Distributed Computing Environment (DCE) standards.
- ▲ SHOULD support symmetric multiprocessing (SMP).

### C. Portable OS

#### Standards — The portable OS **MUST**:

- ▲ provide application portability/independence from specific hardware platforms.
- ▲ be capable of running on several types of processors (e.g. Intel, Alpha RISC, and PowerPC).

#### Recommendations — The portable OS **SHOULD**:

- ▲ support DCE standards.
- ▲ support SMP.

## 2. Hardware

#### Standards — Mid-tier hardware **MUST**:

- ▲ have a native operating system that complies with either of the two OS standards described above.
- ▲ provide a linear upgrade path for uniprocessor configurations.
- ▲ provide performance and capacity scalability for I/O subsystems.
- ▲ provide memory scalability.

#### Recommendations — Mid-tier hardware **SHOULD**:

- ▲ support industry standard I/O subsystems.
- ▲ provide high availability.
- ▲ offer clustering capabilities.

## 3. Platform

### A. General

#### Standards — Mid-tier platform:

- ▲ MUST support both Token Ring and Ethernet.
- ▲ MUST support TCP/IP in a router based environment.
- ▲ MUST be able to run Oracle's database application.
- ▲ MUST interface with SNADS, our existing enterprise e-mail standard (DISOSS and ZIP!Mail/ZIP!Office).
- ▲ SHOULD be able to run mail products that are based upon open standards such as X.400, X.500, and SMTP.



- ▲ MUST support TCP/IP connectivity between desktop clients (e.g. DOS, Windows 3.1, X/Windows (Motif & OpenView), OS/2, Macintosh, etc.), other mid-tier servers, and mainframes (e.g. MVS, VSE, VM, VMS, etc.)

**Recommendations — Mid-tier platform SHOULD:**

- ▲ provide SQL-based access to the State's relational and non-relational data (e.g. IDMS, VSAM, R:Base, dBase) on interconnected, multi-vendor platforms.
- ▲ provide transparent user access to data regardless of location or file structure.
- ▲ be NDS aware.
- ▲ support a generic IPX connectivity (OSI Layer 3 & NetWare Core Protocol) to desktop clients (e.g. DOS, Windows 3.1, OS/2, Macintosh, etc.)
- ▲ be SNMP monitorable.
- ▲ support the following set of sockets and services:
  - generic (OSI Layer 3 & 4) TCP/IP based clients
  - TCP/IP communications between peer mid-tier and mainframe platforms
  - TELNET client & server connectivity
  - FTP server & client services
  - SNMP monitoring
  - support for SMTP
- ▲ support generic DECnet (OSI Layer 3) based clients.
- ▲ support a full feature implementation of SNA, including communication with an IBM host via LU 6.2/APPC.
- ▲ support telephony control or access.
- ▲ support or give access to a wide variety of file types, including DOS, HPFS (OS/2,NT), NFS, and DEC.
- ▲ support the following domain schemes: Novell NetWare Directory Services, TCP/IP's Domain Name Services, and the X.500 standard.
- ▲ support systems management software that supports operations management, performance management, storage management, security management, and change management.

**B. Platform Security**

**Standard**

- ▲ Mid-tier platform security MUST support, at a minimum, a C2 level of security.

**Recommendation**

- ▲ Platform security for systems requiring data encryption/decryption

across the network SHOULD use the DCE implementation of network encryption.

## 4. Applications

### A. General

#### Recommendations

- ▲ Mid-tier application software SHOULD support the OSF DCE standards.
- ▲ Mid-tier applications SHOULD not be written using proprietary operating system services which would limit their cross-platform portability.
- ▲ Mid-tier application developers SHOULD understand that the use of platform specific APIs, like DDE and OLE, could reduce the applications cross-platform portability.

### B. Disaster Recovery

#### Recommendations

- ▲ Disaster recovery standards for each mid-tier application SHOULD require and/or define:
  - Backup methods (Full; incremental, preferably with a periodic verification backup; or selective? Automatic or manual?).
  - Procedures for off-site storage of backup data; supporting software (for the application itself plus backup tools, tracking, and recovery software); supporting manuals; and any other documentation needed to facilitate recovery (hardware configuration diagrams, vendor/employee notification lists, critical forms, etc.).
  - A strategy for restoring the application (documented in written form as a disaster recovery plan).
  - A testing program for validating, improving, and maintaining the recovery plan.
  - A training program for ensuring that employees can implement the plan, there is sufficient cross-training of recovery staff, and potential threats to the application are recognized and eliminated, or reduced, as appropriate.
- ▲ Disaster recovery standards SHOULD be drafted so that:
  - Ownership and responsibility for applications, and the mid-tier platforms upon which they reside, are clear-cut.
  - Controls for managing the development and maintenance of software, for ensuring data integrity, and for adequately

- protecting physical and logical access are well established.
- Standardization is promoted in terms of hardware, software, backup systems, etc. Any exceptions to the standards SHOULD be identified, and planned for, within each application's disaster recovery plan.
- Recovery priorities are established for applications and data. During a recovery, the set of systems available for recovery is limited, so only a relatively small percentage of total data and applications can be restored. Therefore, applications SHOULD be ranked in terms of their:
  - Criticality: What negative impacts would result (financial, legal, goodwill, others) from the loss of a particular application? AND
  - Interdependencies: Do critical applications depend upon other applications or shared data?

To help ensure that critical data and applications can be restored quickly, mid-tier applications standards could provide recommendations (or mandates) that support the ranking of applications for disaster planning purposes. For example, standards could specify how directories SHOULD be established to segregate categories of critical, essential, and nonessential data.

### C. OLTP Software

#### Recommendations — OLTP Software SHOULD:

- ▲ support ISO's Open Systems Interconnection (OSI) and X/Open's Distributed Transaction Processing (DTP) standards.
- ▲ offer support for the CICS API.

## 5. Vendor

### A. Vendor Viability

#### Recommendation — The vendor MUST:

- ▲ demonstrate long-term viability including, but not limited to, meeting a minimum number of years in business standard; posting a performance bond of an amount commensurate with the state's potential loss; and furnishing references of installations that are similar to the state's profile.

## **B. Vendor Service Support**

### **Recommendations:**

- ▲ Service providers will be evaluated by service offerings, level of service, business practices, and delivery capabilities.
- ▲ Service providers SHOULD offer several options, based on response times, spare parts inventory, and self maintenance.
- ▲ Service provider MUST offer an option to train users in self-maintenance.
- ▲ Service provider MUST be willing to assume some responsibility for third-party product support.
- ▲ Service provider MUST provide coverage for Helena and outlying locations.
- ▲ It would be very desirable for the service provider to locate a service technician in Helena.
- ▲ Service provider MUST maintain an inventory of critical component spare parts at its main Montana service location.
- ▲ Service provider MUST be held to maximum response and repair time frames in Helena and outlying locations.

## **C. Disaster Recovery Assistance**

### **Recommendation — Mid-tier vendor SHOULD:**

- ▲ provide disaster recovery assistance.

## **D. ISV Support**

### **Recommendation — Mid-tier vendor MUST:**

- ▲ have widespread and proven ISV support in areas including vertical applications, productivity applications, and systems/network management tools.

---

# **PERSONAL COMPUTER DIRECTIONS**

In 1991, the "Personnel Computer Directions" document was drafted to record the basis of several decisions regarding personal computer hardware and software. The following summarizes these decisions:

- ▲ IBM PC/Intel is the standard personal computer platform.
- ▲ New microcomputer acquisitions must be made using the state microcomputer term contracts.



---

## **DATA SHARING RESOLUTION**

The following resolution was adopted by the Data Processing Advisory Council at their November 5, 1992 meeting:

### **DATA PROCESSING MANAGERS' GROUP RESOLUTION:**

#### **DATA SHARING**

**AUGUST 12, 1992**

WHEREAS, a tremendous amount of electronic data is being maintained by state agencies, and;

WHEREAS, the duplication of electronic data will continue to increase if systems are developed without consideration for the sharing of data with other agencies, and;

WHEREAS, the cost of capturing, processing, and analyzing electronic data can be minimized for the state as a whole if more data sharing takes place between agencies;

NOW, THEREFORE BE IT RESOLVED by the Data Processing Managers' Group that it is a goal of state agencies to share data with other agencies whenever possible, if not prohibited by legal confidentiality requirements. Therefore, during major system development and enhancement projects, all state agencies should consider other agencies' automated systems in their design plans as an alternative to creating redundant data and/or systems within their own agency;

AND, BE IT FURTHER RESOLVED by the Data Processing Managers' Group that agencies should develop systems using software that meets compatibility criteria developed, with agency involvement, by ISD. The criteria should be developed with the purpose of ensuring that agencies acquire and use hardware and software that enable data to be shared among agencies.

---

## **SUMMITNET ACCEPTABLE USE POLICY**

### **SummitNet Defined**

SummitNet is the state's telecommunications nucleus network, or backbone, connecting agency, University, K-12, library, and local government networks. SummitNet provides connectivity to the

Internet, the world's largest network of individuals, governments, organizations, universities, schools, and companies.

SummitNet's telecommunications users are elected officials, state and local government employees, educators, students, researchers, authorized contractors, and non-profit organizations. Through SummitNet, these authorized users can access a wide range of national and international information. This access empowers them in becoming active producers of information rather than passive consumers.

### **SummitNet Acceptable Use**

SummitNet is to be used for: the conduct of state and local government business and delivery of government services; the support of instruction, learning, training, educational administration, research, and grant procurement; the increased participation of citizen oversight of government affairs; and the promotion of economic development.

SummitNet users may be subject to restrictive or limited use of the network, including access to the Internet, as determined by a supervising authority or administrator.

### **Internet Acceptable Use**

Internet is to be used for the transmitting and sharing of information among governmental, research, and educational organizations. SummitNet users may access the Internet to: support open research and education in and between national and international research and instructional institutions; communicate and exchange professional information; encourage debate of issues in a specific field of expertise; apply for or administer grants or contracts; announce requests for proposals and bids; announce new services for use in research or instruction; and conduct other appropriate state business.

SummitNet and the Internet are not to be used for "for-profit" activities or for extensive use for private, recreational, or personal business.

### **Public Access to SummitNet and the Internet**

Private citizens may access SummitNet through the Internet. This Internet access can be obtained through a subscription with a private Internet service provider.

### **Remote Dial-In Access to SummitNet and Internet**

Users who access SummitNet through remote dial-in are to honor and observe this SummitNet Acceptable Use Policy as well as other acceptable use policies defined by networks which they access through SummitNet. Acceptable Use Policy violations by remote dial-in users should be reported to personnel responsible for local network policy enforcement, or to Security Officers with the Department of Administration, Information Services Division.



## User Responsibilities Related to SummitNet and Internet Acceptable Use

SummitNet and Internet users are responsible for:

- ▲ honoring acceptable use policies of networks accessed through SummitNet or the Internet.
- ▲ honoring existing federal, state, and local telecommunications and networking laws, regulations, and policies.
- ▲ using SummitNet and the Internet for state and local government business and educational purposes and not for illegal and for-profit, private, or personal business purposes and activities.
- ▲ reporting to the appropriate authority the violation of any network Acceptable Use Policy.
- ▲ honoring copyright laws regarding protected commercial software or intellectual property.
- ▲ demonstrating respect for an individual's right to privacy and to freedom from intimidation, harassment, and unwarranted annoyance.
- ▲ minimizing unnecessary network traffic that might interfere with the ability of others to make effective use of this shared network resource; such as, refraining from monopolizing systems; overloading networks with excessive data; or wasting computer time, connect time, disk space, or other resources.

## Policy Enforcement

Several tiers or levels of networks and network management are involved with acceptable use policy enforcement. These tiers of networks are:

- (1) SummitNet Tier (State's telecommunications *backbone network* governed by the SummitNet Executive Council. Network managed by the Department of Administration's Information Services Division personnel).
- (2) Logical Tier (Networks *directly connected* to SummitNet. Managed by University, Agency, Enterprise Entity personnel).
- (3) Satellite Tier (Networks connected to Logical Networks. Satellite networks managed by local personnel or by Logical Tier Network personnel).

*Administrative or network management personnel at each tier will enforce the SummitNet Acceptable Policy and their local acceptable use policy.*

## **Policy Violation**

Users of networks are responsible for honoring the SummitNet Acceptable Use Policy and acceptable use policies of networks they access. *Users are also responsible for reporting acceptable use infractions or violations* to their immediate supervisor, to local personnel responsible for local network policy enforcement, or to personnel responsible for the security and enforcement of network policies *where the violation originated*.

Personnel reviewing the reported acceptable use policy violation will determine the validity and severity of the violation and will follow local procedures for dealing with and correcting infractions and violations. These steps will be in-line with existing state and federal laws, policies, and procedures as related to personnel and network management. Violation enforcement may result in an appeal process pursued by the offender, with the highest level of appeal being the SummitNet Executive Council (SEC).

In some cases, the severity of the violation may mandate that it be reported to a higher network tier manager or security officer. The highest tier for reporting is the SummitNet Tier managed by Information Services Division. Once the reported violation reaches this tier, it may involve the Attorney General and Legislative Auditor's Office.

Network monitors at any tier (personnel who monitor the network, network services, and network information for security and/or network management reasons) may also report acceptable use infractions or violations. These network monitors will follow the same tier approach, as defined in the foregoing paragraph, when reporting violations.

## **References**

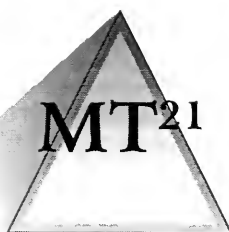
2-15-114, MCA; 2-17-302, MCA (ARM 2.13.101-2.13.107); 2-17-503, MCA; 45-6-311, MCA.

## **Disclaimer**

The SummitNet Executive Council reserves the right to modify this policy at any time. Adopted by the SummitNet Executive Council on November 1, 1995.



*Preparing Montana for the 21<sup>st</sup> Century*



## ***SUPPORTED SOFTWARE***

<b><i>ISD SUPPORTED SOFTWARE</i></b>				
<b><i>Category</i></b>	<b><i>Software</i></b>	<b><i>Version</i></b>	<b><i>Date of Support</i></b>	<b><i>Comments</i></b>
Backup	Palindrome	4.0B		Site License purchased by ISD
Communication	Extra!	1.42		
	Extra! Extended	2.23		
	Extra!	Win 3.3		
	Extra!	Win 3.4		
	Extra!	Win 4.01	Dec 1994	
	Panlink	3.2C	Oct 1991	Orphaned product
	TempusLink	4.01	Jan 1995	Conversion from Panlink to begin late 1995
	Xtalk XVI	3.8	Jan 1994	For 386 PCs with < 2 meg memory
	Xtalk Mark IV	2.1.2		
	Xtalk	Win 2.3	Apr 1995	
Database	Oracle 7 Server	7.1 & 7.2	Jul 1994	Site License purchased by ISD
	Personal Oracle Ent.	7.1	Jul 1995	Site License purchased by ISD
	Oracle Forms	4.5	Jul 1994	
	Oracle Reports	2.5	Jul 1994	
	Oracle Graphics	2.0	Jul 1994	
	Oracle Pro*C	1.5	Jul 1994	
	Oracle Pro*Cobol	1.6	Jul 1994	
	Developer 2000	1.0	Jul 1994	
	Designer 2000	1.1	Nov 1995	
	Discoverer 2000	2.0	Jul 1994	
	SQL Plus	3.1.2.2.6	Jul 1994	
	Network manager	2.13	Jul 1994	
	SQL*NET SPX/IPX	1.0	Jul 1994	Site License purchased by ISD
	SQL*NET TCP/IP	2.0	Jul 1994	Site License purchased by ISD

<i>Category</i>	<i>Software</i>	<i>Version</i>	<i>Date of Support</i>	<i>Comments</i>
Database (continued)	PowerBuilder	4.0	Jul 1994	
	PowerBuilder Desktop	4.0	Jul 1994	
	InfoMaker	4.0	Jul 1994	
	PFS Professional File	2.0	Jul 1989	Orphaned product, to be replaced
	dBASE III+	1.1	Feb 1987	Limited support
	dBASE IV	1.5	Dec 1992	Limited support
	R:Base	3.1C	Jan 1991	
	R:Base	4.5++		Pending database directions
	R:Base compiler	2.11	1988	Limited support
E-mail/Calendar	ZIP!Office	1.25	Apr 1994	Site License purchased by ISD
	ZIP!Mail	1.20	Jan 1992	Site License purchased by ISD
	EMC2/TAO	3.03	Apr 1991	Site License purchased by ISD
	EMC2/PCLink	356	Apr 1991	Site License purchased by ISD
	Personal EMC2/TAO	226204A	Dec 1993	Site License purchased by ISD
Graphics	CorelDraw	5.0	Jul 1995	Limited support (3.0 & 4.0 also supported)
	Freelance	3.01	Dec 1990	
	Freelance	Win 2.1	Apr 1993	
GUI	Windows	3.1	Jul 1992	
Operating System	DOS	6.22		Recommend 5.0 or higher
	NetWare	3.12		
	NetWare	4.1	Jul 1994	Master License Agreement purchased by ISD
Online Documentation and Help	Assist/Vision	2.1	Apr 1993	
	IBM Library Reader	1.2	Apr 1993	
	IBM Library Reader	Win 2.0	Jan 1995	
	Oracle Book	2.0.4.6.0	Jun 1994	
Spreadsheets	Lotus 1-2-3	2.4	Sep 1992	For 286 PCs with < 2 meg memory
	Lotus 1-2-3	3.4	Apr 1993	For 386 PCs with > 2 meg memory
	Lotus 1-2-3	4	Sep 1994	Current product, but recommend using 3.4

<i>Category</i>	<i>Software</i>	<i>Version</i>	<i>Date of Support</i>	<i>Comments</i>
Spreadsheets (continued)	Lotus 1-2-3	Win 5.0	Oct 1994	Recommended (Win 4.0 also supported)
Statistics	SAS (mainframe)	6.07	Mar 1993	Purchased by ISD
	SAS (PC)	Win 6.08	Dec 1992	Site license purchased by ISD
	SAS (PC)	Win 6.10	Jan 1995	Site license purchased by ISD
Virus Protection	McAfee Viruscan	2.2.9	Sep 1995	Site license purchased by ISD
Word Processing	WordPerfect	5.1	Aug 1990	Recommended for low-end DOS machines
	WordPerfect	6.0	Nov 1993	
	WordPerfect	Win 6.1	Feb 1995	

<b>MAINFRAME SOFTWARE PRODUCTS</b>			
<i>Product Name</i>	<i>Product ID</i>	<i>Current Level</i>	<i>Vendor</i>
ACF2		6.1	Computer Associates
AD/CYCLE LE/370 C MIXED CASE ENG	5688-198	1.3.0	IBM
AF/OPERATOR		225	Candle Corporation
AF/REMOTE		250	Candle Corporation
ALPHA SEARCH	5799-EHJ	2.2.0	IBM
ASSEMBLER H	5668-962	2.1.0	IBM
AUTOTRIEVE		1.0	NER
BASIC/VS	5748-XX1	1.0	IBM
BMS/GT		6.1	GT Software
BTAM/SP	5665-279	1.1.0	IBM
BTP	5744-CG2	1.4.0	IBM
BTP COBOL GENERATOR	5796-ANF	1.0	IBM
C/370 PL/I	5668-910	2.3.0	IBM
CA-1		5.0	Computer Associates
CA-90 SERVICES		1.0	Computer Associates
CA-DOCVIEW		4.0	Computer Associates
CA-EARL		6.0	Computer Associates
CICS/MVS	5655-018	4.1.0	IBM
CICS ABENDAID		5.4	Compuware
CICS FILE TRANSFER	5798-DQH	1.1	IBM
CICS RADAR		4.3.1	Compuware
CICS-CEMT		4.0	MacKinney
CICS-EYEWITNESS		2.1	Landmark
CICS-JUGGLER		4.2	Soft Touch

<i><b>Product Name</b></i>	<i><b>Product ID</b></i>	<i><b>Current Level</b></i>	<i><b>Vendor</b></i>
CICS-MESSAGE		1.4	MacKinney
CL/CONFERENCE			Candle Corporation
CICS RADAR		4.3.1	Compuware
CICS-CEMT		4.0	MacKinney
CICS-EYEWITNESS		2.1	Landmark
CICS-JUGGLER		4.2	Soft Touch
CICS-MESSAGE		1.4	MacKinney
CL/CONFERENCE			Candle Corporation
CL/SUPERSESSION		146	Candle Corporation
CMF MONITOR		4.3.1	Boole & Babbage
COBOL & CICS COMMAND LEVEL CONVERSION AID (CCCA)		1.6	IBM
COBOL CONVERSION AID	5785-ABJ	1.1.6	IBM
COBOL FOR MVS	5688-197	1.2.0	IBM
COBOL II COMP/LIB/DEBUG	5668-958	1.4.0	IBM
COBOL OS/VS/COMPILER	5740-CB1	1.2.4	IBM
COBOL REPORT WRITER	5798-DYR	2.0	IBM
COMPAREX		7.1.2	Sterling
CONTROL-M (Job Scheduler)		4.0.0	4th Dimension
CONTROL-R (Job Restart)		3.0.0	4th Dimension
CSP/370 AD	5688-218	4.1.0	IBM
CSP/370 RUNTIME SERVICES	5668-206	2.1.0	IBM
CSP/AD WORKSTATION ENU	5668-813	3.3.0	IBM
CSP/AE	5668-814	3.3.0	IBM
DBA TOOLKIT		5.5.1	Computer Associates
DBMS			

<i>Product Name</i>	<i>Product ID</i>	<i>Current Level</i>	<i>Vendor</i>
DEC DTF		3.1	DEC
DEVELOPER TOOL KIT (FOR IDMS)		3.5	Computer Associates
DMS/OS		8.1	Sterling Software
DOCUMENT COMPOSITION FACILITY	5748-XX9	1.4.0	IBM
DYL-250		2.0	Sterling Software
DYL-260		9.5	Sterling Software
DYL-SORT		??	Sterling Software
EASY PROCLIB		2.2	Computer Associates
EMC/TAO		3.2.2	Fischer
EP 3725 - NCP11	5735-XXB	1.12	IBM
EP 3725 / 3720 - NCP12	5735-XXB	1.6.1	IBM
EREP	5658-260	3.5.0	IBM
ESCON DIRECTOR DEVICE SUPPORT	5685-001/2	1.1.0	IBM
FDR		5.2/04	Innovation
FONT: BAR CODE/OCR	5688-021	1.1.1	IBM
FONT: CENTURY SCHOOLBOOK	5771-ADJ	1.1.0	IBM
FONT: SONORAN SANS SERIF CONDENSED	5771-AFL	1.1.1	IBM
FORTRAN VS COMPILER & LIBRARY	5748-FO3	1.4.0	IBM
GDDM/MVS (Includes GDDM-PCLKF)	5695-167	3.1.1	IBM
GDDM-IVU MVS	5668-723	3.1.0	IBM
GDDM-PGF MVS	5668-812	3.1.0	IBM
GENX			The A Team
HCD	5655-068	5.1.0	IBM
HIGH LEVEL ASSEMBLER	5696-234	1.1.0	IBM
HOST COMMAND FACILITY (HCF)	5668-985	2.1.0	IBM

<b>Product Name</b>	<b>Product ID</b>	<b>Current Level</b>	<b>Vendor</b>
ICKDSF MVS/XA ESA w/ ISMF PANELS	5655-257	1.16.0	IBM
IDMS		10.2	Computer Associates
INFOPAC-RDS		5.2	Mobius Management Sys.
INFO/MANAGEMENT	5665-383	3.1.0	IBM
INFO/SYSTEM	5665-384	3.1.0	IBM
ISPF	5685-054	3.5.0	IBM
ISPF/PDF	5665-402	3.5.0	IBM
JES2	5695-047	4.3.0	IBM
LE for MVS & VM	5688-198	1.5.0	IBM
LISTCAT PLUS		6.5	MacKinney
MARK IV		9.0	Sterling Software
MVS/ESA BCP	5695-047	4.3.0	IBM
MVS/ESA DFP	5665-XA3	3.3.1	IBM
MVS/QUICKREF		4.0	Chicago Soft
MXG		12.12	Merril & Associates
NCP	5648-063	7.2.0	IBM
NCP	5668-738	5.3.1	IBM
NCP	5668-738	5.4.0	IBM
NCP	5668-854	4.3.1	IBM
NDM - NETWORK DATA MANAGER		1.7.0	Sterling Software
NETSPY		4.5.02	Legent Corporation
NETVIEW	5685-111	2.4.0	IBM
OGL/370	5688-191	1.1.0	IBM
OMEGAMON II FOR MVS		200	Candle Corporation
OMEGAMON II FOR CICS		300	Candle Corporation



<i><b>Product Name</b></i>	<i><b>Product ID</b></i>	<i><b>Current Level</b></i>	<i><b>Vendor</b></i>
OMEGAVIEW		120	Candle Corporation
OPTIMIZER II		1.3	Computer Associates
PANLINK/TEMPUS LINK		3.2	Computer Associates
PANVALET/ISPF		14.2	Computer Associates
PANVALET		14.2	Computer Associates
PC FILE TRANSFER	5665-311	1.1.1	IBM
PL/I	5668-910	2.3.0	IBM
PPFA/370	5688-190	1.1.0	IBM
PSF/MVS	5695-040	2.2.0	IBM
RESOLVE		3.0.0	Boole & Babbage
SAS		6.08	SAS
SDSF	5665-488	1.4.0	IBM
SMP/E	5668-949	1.8.1	IBM
SSP	5655-338	4.2.0	IBM
STROBE		8.5C	Programart
SYNCSORT		3.5AR	Syncsort
TCP/IP	5655-HAL	3.1.0	IBM
TMON - The Monitor For CICS		8.1	
TPL			
TSO/E	5685-025	2.4.0	IBM
VISUALGEN	5648-040	1.0	IBM
VPS/VMCF		6.0.A	Levi, Ray & Shoup
VS FORTRAN	5668-806	2.6.02	IBM
VTAM	5695-117	4.2.0	IBM
XPEDITER		6.1	Compuware



## **ACRONYMS**

3GL	Third Generation Language
4GL	Fourth Generation Language
AAMVAnet	American Association of Motor Vehicle Administrators' network
ACD	Automatic Call Distribution
ACH	Automated Clearing House
ACIS	Adult Correctional Information System
ADS	Applications Development Section (Dept. of Administration, ISD)
ADSO	Application Development System Online
AFDC	Aid to Families with Dependent Children
AFIS	Automated Fingerprint Identification System
ALI	Automatic Location Identification
ANI	Automatic Number Identification
ANSI	American National Standards Institute
APATS	Automated Payroll and Timekeeping System
APC	Automation Planning Committee (Dept. of Justice)
API	Application Programming Interface
APPC	Advanced Program to Program Communications
ARM	Administrative Rules of Montana
ARPS	Automated Requisition Purchasing System (Dept. of Labor)
ASCOT	Aerial Survey Control Tool
ATM	Asynchronous Transfer Mode
AVC	Automatic Vehicle Classification
AWACS	Agency-Wide Accounting and Client System (DPHHS)
BAS	Budget Allocation System
BBS	Bulletin Board System
BCD	Biological and Conservation Data System
BeAR	Benefits Automated Rewrite
BEVS	Business Equipment Valuation System
BIS	Benefits Information System
BPR	Business Process Reengineering
bps	Bits per Second
BRTF	Governor's Blue Ribbon Telecommunications Task Force
C2	Command and Control



CADD	Computer Aided Design and Development
CAMAS	Computer Assisted Mass Appraisal System
CAPS	Child and Adult Protective Services
CCB	Capitol Complex Backbone
CD (also CD-ROM or CD ROM)	Compact Disk Read Only Memory
CDC	Centers for Disease Control
CD-ROM (also CD or CD ROM)	Compact Disk Read Only Memory
CICS	Customer Information Control System (IBM)
CJIN	Criminal Justice Information Network
CLI	Compression Labs, Inc.
CMS	Collection Management System
COB	Computing Operations Bureau (Dept. of Administration, ISD)
COBOL	Common Business Oriented Language
CPD	Computing, Policy, and Development Section (Dept. of Administration, ISD)
CPU	Central Processing Unit
CRAR	Cash Receipts/Accounts Receivable
CRT	Cathode Ray Tube (terminal)
CSENet	Child Support Enforcement Network
CSU/DSU	Channel Service Unit/Data Service Unit
CTI	Computer Telephony Integration
CTPS	Contract Tracking and Payments System
CUI	Character User Interface
CY	Calendar Year
DASD	Direct Access Storage Devices
DBA	Database Administration
DBMS	Database Management Systems
DCE	Distributed Computing Environment
DDE	Dynamic Data Exchange
DEC	Digital Equipment Corporation
DEQ	Department of Environmental Quality
DHES	the former Department of Health and Environmental Sciences
DLI	Department of Labor and Industry
DNRC	Department of Natural Resources and Conservation
DOA	Department of Administration
DOR	Department of Revenue
DOS	Disk Operating System
DOT	Department of Transportation
DPHHS	Department of Public Health and Human Services
DS-3 (also T-3)	Digital Service, Level 3 (equivalent to 28 T-1 channels)
DTP	Distributed Transaction Processing

EBS	Executive Budget System
EBT	Electronic Benefits Transfer
EC	Electronic Commerce
EDI	Electronic Data Interchange
EEO	Employee Equal Opportunity
EFT	Electronic Funds Transfer
EIS	Emergency Information System
ELF	Electronic Filing
e-mail (also E-mail)	Electronic Mail
EPP	Executive Planning Process
ETR	Electronic Tax Reporting
EUS	End Users Systems Support Section (Dept. of Administration, ISD)
FAIM	Families Achieving Independence in Montana
FCC	Federal Communications Commission
FDDI	Fiber Distributed Data Interface
FM	Facilities Management
FTE	Full-Time Equivalent
FTP	File Transfer Protocol
FWP	Department of Fish, Wildlife and Parks
FY	Fiscal Year
GB	Gigabyte (a unit of measure for data storage equal to about one billion bytes)
GIS	Geographic Information System
GL	Generation Language
GPS	Global Positioning System
GUI	Graphical User Interface
HPFS	High-Performance File System
HTML	Hypertext Markup Language
IBM	International Business Machines
ICC	Information Control Core
IDMS	Integrated Data Management System
IFB	Invitation for Bid
IIT	Individual Income Tax
I/O	Input/Output
IPX	Internet Packet Exchange (Novell NetWare)
IRM	Information Resource Management
ISB	Information Services Bureau (Department of Environmental Quality)
ISD	Information Services Division (Dept. of Administration)
ISDN	Integrated Services Digital Network
ISO	International Standards Organization
ISTEA	Intermodal Surface Transportation Efficiency Act



ISV	Independent Software Vendor
IT	Information Technology
ITA	Information Technology Architecture
ITAC	Information Technology Advisory Council
ITC	Information Technology Commission
ITMG	Information Technology Managers' Group
IV/HS	Intelligent Vehicle/Highway Systems
IVR	Interactive Voice Response
JOBS	Job Opportunities and Basic Skills
KB	Kilobyte (a unit of measure for data storage equal to 1024 bytes)
kbps	Kilobits per Second; Thousand Bits per Second
LAN	Local Area Network
LAS	Legislative Appropriation Reporting System
LAWS	Legislative Automated Workflow System
LBS	Legislative Budget System
LFD	Legislative Fiscal Division
LIEAP	Low Income Economic Assistance Program
MACCS	Montana Child Care System
MAEFAIRS	Montana Automated Education, Financial and Information Reporting System
MAR	Montana Administrative Register
MB	Megabyte (a unit of measure for data storage equal to about one million bytes)
MBCC	Montana Board of Crime Control
Mbps	Megabits per Second; Million Bits per Second
MCA	Montana Code Annotated
MDT	Montana Department of Transportation
METNET	Montana Educational Telecommunications Network
MHz	Megahertz
MIBS	Montana Integrated Budget System
MII	Montana Information Infrastructure
MIPS	Millions of Instructions per Second
MJCMS	Montana Judicial Case Management System
MLA	Master License Agreement
MMIS	Medicaid Management Information System
MOD	Master Ownership Database
MOM	Montana Operations Manual
MSU	Montana State University
MTAC	Montana Telecommunications Advisory Council
MT PRIME	Montana Project to Reengineer the Information Management Environment
MVS	Multiple Virtual Storage
NCIC	National Crime Information Center

NDS	NetWare Directory Services
NFS	Network File System
NIST	National Institute of Standards and Technology
NMG	NetWare Managers' Group
NRIS	Natural Resources Information System
NTIA	National Telecommunications and Information Administration
OAC	Office of the Court Administrator (Judicial Branch)
OBPP	Office of Budget and Program Planning
OCR	Optical Character Recognition
OEE	Online Edit and Entry
OLE	Object Linking and Embedding
OLTP	Online Transaction Processing
OMB	Office of Management and Budget
OPI	Office of Public Instruction
OPPEN	Office Public/Private Enterprise Network
OS	Operating System
OSF	Open Systems Foundation
OSI	Open Systems Interconnection
PAMS	Property Accountability Management System
PBX	Private Branch Exchange
PC	Personal Computer
PDA	Personal Digital Assistants
PDCR	Policy, Development, & Customer Relations Bureau (Dept. of Administration, ISD)
PDF	Position Detail Form
PERS	Public Employees' Retirement System
PIM	Personal Information Managers
POS	Point of Sale
P/P/P (also PPP)	Payroll/Personnel/Position Control
PSAP	Public Safety Answering Point
PSC	Montana Public Service Commission
PSCTF	Public Safety Communications Task Force
PSWAC	Public Safety Wireless Advisory Committee
RDA	Remote Dial-in Access
RDBMS	Relational Database Management System
RDM	Remote Data Management
RDS	Report Distribution System
REACH	Realizing Education and Community Health
RES	Revenue Estimate Reporting System
RFI	Request for Information
RFP	Request for Proposal



RFQ	Request for Quotation
RJE	Remote Job Entry
SBAS	Statewide Budgeting and Accounting System
SDLC	Synchronous Data Link Control
SDS	Systems Development Support System
SEARCHS	System for the Enforcement and Recovery of Child Support
SEC	SummitNet Executive Council
SGML	Standard Generalized Markup Language
SJR 23	Senate Joint Resolution No. 23
	Joint Interim Subcommittee on State Management Systems
SLIP	Serial Line Internet Protocol
SMP	Symmetric Multiprocessing
SMS	Spectrum Management System
SNA	Systems Network Architecture (IBM)
SNADS	SNA Distribution Services (IBM)
SQL	Structured Query Language
SSB	Systems Support Bureau (Dept. of Administration, ISD)
STN	State Telecommunications Network
SummitNet	State and Universities of Montana Multiprotocol Network
T-1 (or T1)	A digital transmission link with a capacity of 1.544 Mbps
TAG	Technical Advisory Group
TCP/IP	Transmission Control Protocol/Internet Protocol
TDD	Telecommunications Device for the Deaf
TDD/TTY	A unique telecommunications device for the deaf using TTY principles
TEAMS	The Economic Assistance Management System
TIS	Transportation Information System
TOB	Telecommunications Operations Bureau (Dept. of Administration, ISD)
TRS	Montana Teachers' Retirement System
TSO	Time Sharing Option
TTY	Teletypewriter for communicating alphanumeric information over telecom networks
UCC	Uniform Commercial Code
U of M	University of Montana
UPS	Uninterruptible Power Supply
VAX	A line of minicomputers made by Digital Equipment Corporation (DEC)
VICs	Visitor Information Center Systems
VM	Virtual Memory
VMS	Virtual Memory System
VSAM	Virtual Storage Access Method
VSE	Virtual Storage Extended
WAIS	Wide Area Information Service

WAN	Wide Area Network
WARP	Wage Automated Reporting Program
WCAP	Workers' Compensation Automated Project
Web (also web and WWW)	World Wide Web
WH/OFLT	Withholding/Old Fund Liability Taxes
WIC	Women, Infants, and Children
WLN	Western Library Network
WWW (also Web and web)	World Wide Web







1250 copies of this public document were published at an estimated cost of \$5.85 per copy, for a total cost of \$7312.50, which includes \$7312.50 for printing and \$.00 for distribution.